JOURNAL OF
NEAR EASTERN STUDIES

Volume VIII JANUARY 1949 *Number 1*

THE DECORATION OF A NEW KINGDOM VASE

L. KEIMER

THE clay vessel which is illustrated in Plates I–IV is at the present time in the collection of Khawam Brothers, antiquity dealers in Cairo. It belongs to a class of vases of the New Kingdom (about the end of the Eighteenth and Nineteenth dynasties)[1] which is represented by many examples.[2] It was probably Prisse d'Avennes who gave us the first colored reproduction of such vases.[3] The Khawam example, which, according to the owners' statement, was found in Sakkara,[4] is about 36 cm. in height. It tapers rather sharply toward the bottom, precisely like the two examples shown by Prisse d'Avennes in the plate entitled "Amphores, jarres et autres vases," bottom row, left and right.[3] The ring stand (of clay, like the vase itself) in which the owners have placed the vase for exhibition (Pls. I–IV) is ancient and fully appropriate[5] but does not belong to it. The flat, plate-shaped lid with knob, which can be assumed by analogy with the above-mentioned examples illustrated by Prisse d'Avennes to have once belonged to the Khawam vase likewise (though lids of other shapes were also in use), is now lacking.

The reader may question the purpose of publishing once again an example of an already well-known type of vessel, for one

[1] Cf. G. Nagel, "Quelques représentations de chevaux sur des poteries du Nouvel Empire," *Bull. Inst. Franç. archéol. Orient. du Caire*, XXX (1930), 185–94.

[2] It is necessary to mention but a few of the many published examples: Henry Wallis, *Egyptian Ceramic Art. The Macgregor Collection* (1898), Pl. XV, in color (= *Burlington Fine Arts Club. Catalogue of an Exhibition of Ancient Egyptian Art*, 1922, Pl. XXXV, photograph; p. 64 *L*), p. 35, figs. 65–69, especially fig. 67, p. 36 (several specimens); p. 48, fig. 98 (in fayence); L. Borchardt, *Works of Art from the Egyptian Museum at Cairo* (1908), Pl. 46, Text, p. 19, No. 46; W. Spiegelberg, *Ausgewählte Kunst-Denkmäler der aegypt. Sammlung der Kaiser Wilhelm Universität Strassburg* (Leipzig, 1909), Pl. XIX, No. 71 (= Springer, *Kunstgeschichte*, Vol. I [10th ed.], Pl. III 2); G. Möller, *Bemalte Tongefässe*, in "Amtliche Berichte aus den Königl. Kunstsammlungen," XXXIX. Jahrgang, No. 10 (Berlin, July, 1918), cols. 217–27; Peet and Wooley *The City of Akhenaten*, Part I (1923), Pls. XLIV and XLV; Davies, *The Tombs of Two Officials* (1923), Pl. VI; Schäfer and Andrae, *Kunst des alten Orients* (1925 and 1930 [I have not yet seen the last edition]), Pl. XIX (in color); E. Schiaparelli, *Relazione sui lavori della Missione archeologica*, II (Turin, 1927), 80, Fig. 45; G. Nagel, "Quelques représentations," etc. (see note 1, above), pp. 185–94, unnumbered plate; compare also B. Bruyère, *Rapport sur les fouilles de Deir el Médineh* (1928) (Cairo, 1929), p. 9, Fig. 4; p. 24, Fig. 15; p. 31, Fig. 21; p. 39, Fig. 26; p. 94, Fig. 52; p. 102, Fig. 58; p. 113, Fig. 63; p. 125, Fig. 69, etc.

[3] *Histoire de l'art égyptien*, 2 vols. of plates (Paris, 1878–79) + text vol. by P. Marchandon de la Faye. The plates are unnumbered.

[4] Although (perhaps by chance) I know of no other examples of the same provenience, it should be pointed out that Sakkara has yielded monuments of all periods of Egyptian history. Furthermore, Selim Hassan Bey has found vases and fragments of vases of the type under consideration near the pyramids of Giza; see his *Excavations at Giza*, Vol. V: *1933–34* (Cairo, 1944), Pl. LXXI *A*, Text, p. 316 (28).

[5] Cf., e.g., Davies, *The Tombs of Two Officials*, Pls. I and VI.

who but casually observes the Khawam vase (Pls. I–IV) will notice no feature of special interest. However, more careful consideration of the different elements which constitute its decoration turns out to be most instructive.

In an interesting article now perhaps almost forgotten, Georg Möller pointed out some thirty years ago that the ancient Egyptians sometimes wreathed their vessels with garlands of real flowers and that certain definite decorative motifs had developed out of this practice of natural flower decoration.[6] "Niemals darf der Schmuck von Blumen an den Wein- und Bierkrügen fehlen, die man im neuen Reiche sogar mit bunten Matten behängt. *Blumenkränze für die Krüge* sind etwas unumgänglich Notwendiges, und wenn der Hof durch eine Stadt reist, müssen die Beamten für . . . Blumenkränze . . . Sorge tragen."[7] The Egyptian texts themselves refer to the "adorning of a vessel."[8]

In the case of the Khawam vase (Pls. I–IV), it is a question of the adorning of a vase which is itself in the form of a woman —a woman, to be true, conventionalized to the utmost, with head, breasts, and abdomen all discreetly and unobtrusively suggested.[9] The head of this woman has the shape of an exceedingly crudely formed lump of clay applied near the top of the "neck," just below the rim of the vase (Pls. I, II, III). The hair, or, more correctly, the wig, is indicated by vertical wavy lines painted in brown. Three of such wavy lines frame the face on either side, at right and left, while a third group of them occur on the "back" of the neck of the vase, immediately opposite the clay lump which forms the head (Pl. IV). One is reminded by these details of the frequently depicted coiffure of ancient Egyptian women, in which two strands of hair frame the face, while a third hangs from the back of the head[10] (Pl. V).[11]

The "neck" of the vase here plays the role of an excessively elongated woman's neck. The two groups of three horizontal parallel lines which encircle the neck (Fig. 1*a*) are probably to be explained purely as decoration, but they might likewise be interpreted as greatly stylized necklaces which the woman is wearing. The middle of the vase is characterized by two miniature protuberances similar to female breasts (Pl. I; Fig. 1*b*). These are executed in still more rudimentary fashion than the head, but they have been formed and attached in precisely the same manner. Each of the two mammillae is connected by a vertical line in brown paint to one of the horizontal lines which encircle the vessel, namely, the lowest line of the second group (Pl. I; Fig. 1*b*). I pass at once to the interpretation of these two short connecting lines. Midway between the two diminutive breasts, and precisely on the vertical median line of the woman, is a small inverted isosceles triangle (Pl. I; Fig. 1*b*) the flattish top of which is likewise connected by a line (in this case, a red line) with the horizontal circle above. What, then, is the significance of these connecting lines? The answer to the ques-

[6] G. Möller, *op. cit.*, cols. 217–27.

[7] Erman and Ranke, *Aegypten und aegyptisches Leben im Altertum* (Tübingen, 1923), p. 222.

[8] A. H. Gardiner, *The Adventures of an Egyptian Sage* (Leipzig, 1909), p. 60, 7, 14 = Erman, *Literatur der Aegypter* (1923), p. 142; H. Grapow, *Die bildlichen Ausdrücke des Aegyptischen* (Leipzig, 1924), p. 146 (with n. 2). Cf. also the representations of vases with natural flower decoration as, e.g., Davies, *The Tombs of Two Officials*, Pls. V, XXIII, etc.; Davies, *Ancient Egyptian Paintings* (1936), Vol. II, Pl. LXX, etc.

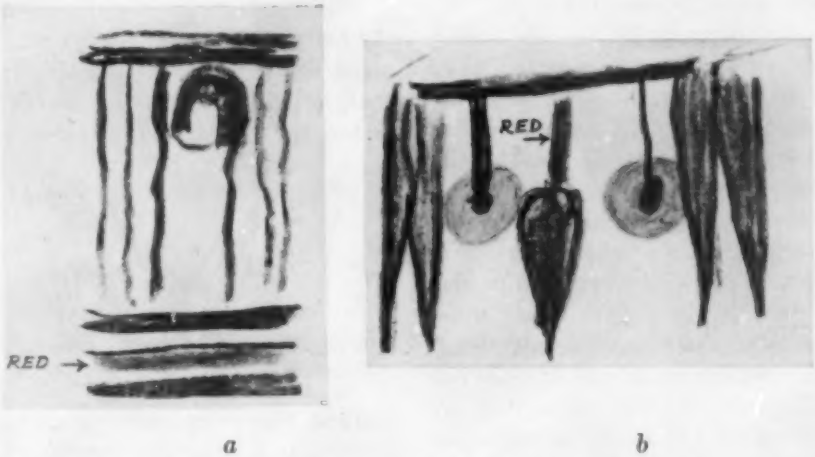
In contrast to other vases, as, e.g., Henry Wallis, *Egyptian Ceramic Art: The Macgregor Collection*, p. 35, Fig. 65, and p. 38, Fig. 83*a*.

[10] H. Fechheimer, *Kleinplastik der Aegypter* (Berlin, 1921), Pls. XXVIII and XXIX.

[11] Limestone statuette (Middle Kingdom) of a nude woman with tattooed crosses. This fragment of a statuette, observed in the shop of a Cairo dealer in antiquities, is discussed in my monograph, now in press, "Remarques sur le tatouage dans l'Égypte ancienne" (*Mém. Inst. d'Égypte*, Vol. LIII [Cairo, 1949]).

tion is not difficult. The two little breasts have here become a pair of "lotus" leaves—everyone is familiar with the round pads of the water lily[12]—suspended on their stems, while the pudenda of the woman have been stylized into a "lotus" bud attached to a red stem (Pl. I; Fig. 1*b*). Some years ago I published an example of the female genitalia delicately indicated by petals of the white "lotus" flower (*Nymphaea lotus* L.), with the center divided by two vertical parallel lines (Pl. VI).[13] These petals undoubtedly correspond—though in my above-mentioned publication of the object under discussion I forgot to mention the fact—to the Egyptian hieroglyph in inverted position, thus .

To the right and left of the tiny breasts and continuing entirely around the vase are repeated examples of the petals of the Egyptian blue "lotus" (*Nymphaea caerulea* Sav.), as they are so frequently found on mummies, either the genuine flowers themselves or as imitations of nature carried out in various materials, such as stone, faience, glass, etc.[14] To sum up, then, the craftsman to whom we owe the Khawam vase has represented the following: (1) the head of a woman; (2) the breasts and pudenda of a woman. The breasts have the form of "lotus" leaves and the genitalia that of a blue "lotus" bud (*Nymphaea caerulea* Sav.). These two "lotus" leaves and the "lotus" bud are in the midst of a broad collar (*wsḫ*) which, composed also of an arrangement of blue "lotus" petals, thus "adorns" the "breast" and "shoulders" of the vase. These petals of *Nymphaea caerulea* Sav., as may be observed from garlands of the natural flowers found in tombs, are fastened at the top to a cord made of plant fibers: on the Kha-



a *b*

FIG. 1.—Detail of decoration of the Khawam vase. Color of original is brown except as otherwise indicated.

[12] Cf., e.g., Keimer, *Ann. du serv.*, XXVIII (1928), 38–39, and *Revue de l'Egypte ancienne*, II (1929), 233–34.

[13] Keimer, "Jeux de la nature retouchés par la main de l'homme, provenant de Deir el-Médineh (Thèbes) et remontant au Nouvel Empire" (*Études d'Égyptologie*, Fasc. II [Cairo, 1940]), Pl. VII and Fig. 3, p. 8. Our Pls. VI, *A*, and VI, *B*, correspond to Pls. VII, *a*, and Fig. 3, respectively, of this work.

[14] Examples are so numerous and well known that further discussion is unnecessary in this place. Cf. Keimer, *BIFAO*, XXXI (1931), 197–200 and especially Pls. I, 3, 4 and II, 1.

wam vase this cord is rendered by the line immediately above the petals (Pl. I; Fig. 1*b*).

The Khawam vessel is thus a splendid example of the skill of the ancient Egyptians in expressing objective reality by means of symbols and, in the present case, in placing plant ornamentation at the disposal of symbolism.

The lowest band of decoration on our vase may be divided into two groups, the first symbolic in character, the second a purely ornamental representation. For a symbolical purpose is unquestionably achieved by the two Ḥatḥor cows which are shown advancing from the right and left toward a central papyrus clump (*Cyperus papyrus* L.); this composition here constitutes a strikingly beautiful decorative motif.[15] As usual, the cows are characterized by the sun disk between the horns and by the stylized spotted pattern of the coat,[16] while a large blue "lotus" blossom (*Nymphaea caerulea* Sav.) hangs from the neck of each animal. It is obvious that these cows—and of course only one cow is intended; the second merely represents a concession to symmetry of composition—really ought to be coming *out* from the papyrus thicket,[17] as they are so frequently depicted on the ancient Egyptian monuments. Indeed, a wonderful faience bowl of the New Kingdom (Pl. VII)[18] shows the cows (three in all) in a pool of water thickly grown with *Nymphaea caerulea* Sav. (upper row) and *Nymphaea lotus* L. (lower row), instead of the papyrus marsh which the orthodox Egyptian theology apparently required. To be sure, the cows are not actually characterized as sacred animals by any attribute. However, in spite of such artistic liberties (three cows instead of one; blue and white "lotus" instead of a papyrus clump), it is my opinion that the representation on the faience bowl (Pl. VII) goes back to the familiar motif of the Ḥatḥor cow in the papyrus swamp.

The significance of the Ḥatḥor cows on the belly of the vase requires a brief explanation. In my judgment they indicate that the lady of the vase has placed herself under the protection of the goddess

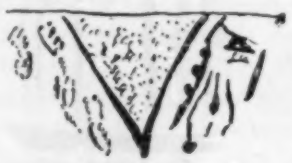


FIG. 2

Ḥatḥor. Many analogous examples could be cited, as, for example, our Plate VIII, *A* and *B*, which represents two female idols of wood from the Middle Kingdom.[19] The idol shown in Plate VIII, *A*, has been provided by the craftsman with a much stylized drawing of Taweris on the right and a similarly conventionalized girdle of cowrie shells (the Nubian *rahad*) on the left of the mons pubes (Fig. 2),[20] while Plate VIII *B* shows two such sketches of Taweris (Fig. 3). The role which they play on the

[15] Similarly, but naturally with no Ḥatḥor cow, Peet and Woolley, *The City of Akhenaten*, Part I (1923), Pl. XXXIX (top right).

[16] Of the numerous examples it is sufficient to point out the bed in the form of a cow from the tomb of Tutankhamun: see Carter and Mace, *The Tomb of Tut.ankh.Amen*, Vol. I (1923), Pl. XVIII.

[17] Naville, *The XIth Dynasty Temple at Deir El-Bahari*, Part I (1907), Pls. I and XXIX; *Facsimile of the Papyrus of Ani in the British Museum* (London, 1890), Pl. 37.

[18] Height *ca.* 20 cm. Formerly in the collection of M. Levi de Benzion in Cairo, it was recently acquired in public sale by the antiquities dealer, P. J. Tano.

[19] They are to be discussed in my book, *Remarques sur le tatouage dans l'Égypte ancienne* (*Mém. Inst. d'Égypte*, LIII [Cairo, 1949]), now in press. For this group of monuments cf. Petrie, *Objects of Daily Use* (London, 1927), Pl. LI, Nos. 379–82.

[20] This girdle must naturally be considered as on the abdomen. Furthermore, one could suppose that the Taweris and the girdle of cowrie shells of Pl. VIII, *A*, go back to a girdle of this sort, to which a Taweris amulet was fastened (cf. Petrie, *Amulets* [London, 1914], Pl. XIV, and esp. Pls. XVII *d* and XVIII, 131 *f* [bottom right]).

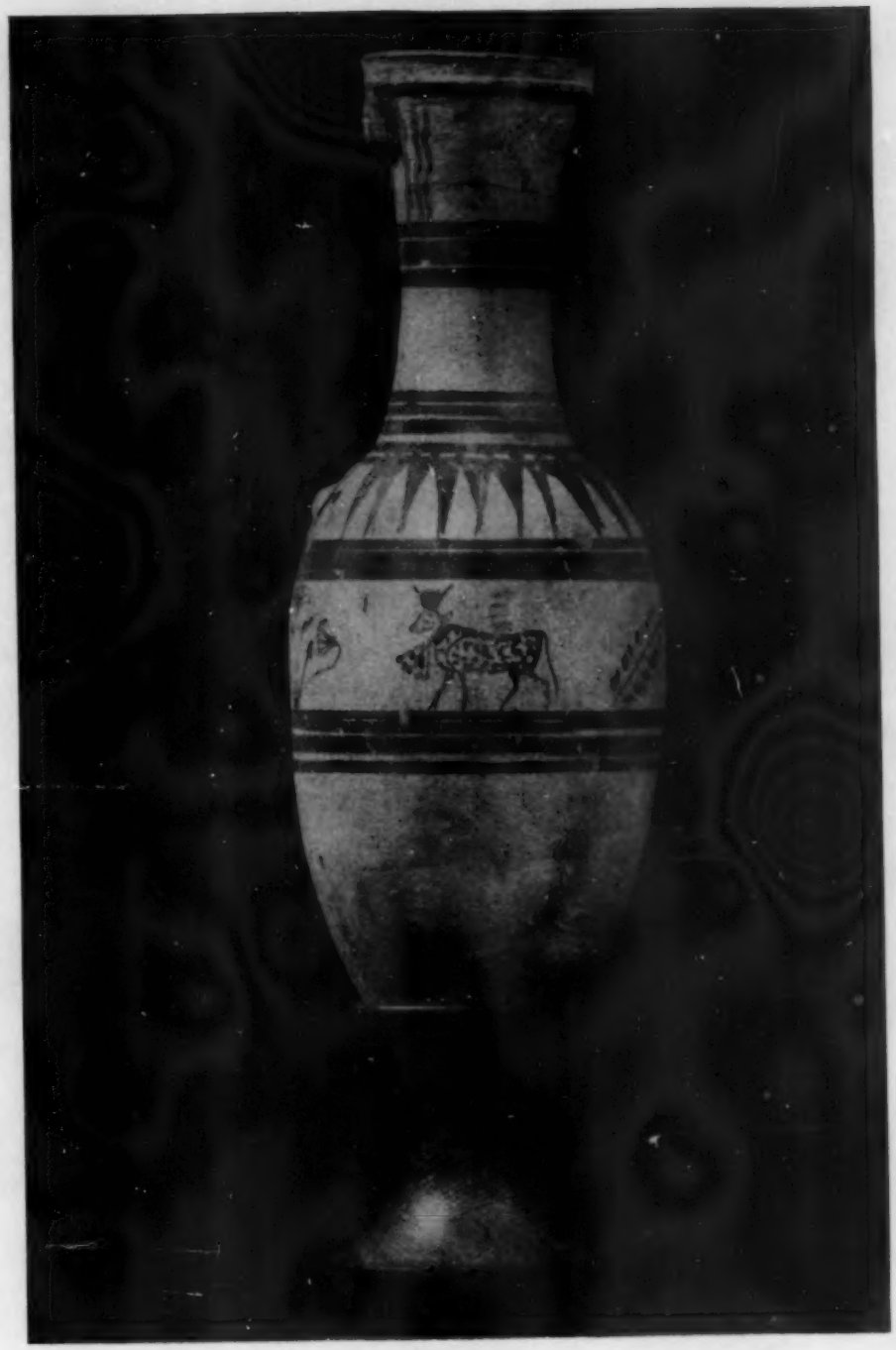
PLATE I

POTTERY VASE OF THE NEW KINGDOM, FRONT

PLATE II

POTTERY VASE OF THE NEW KINGDOM, RIGHT SIDE

PLATE III

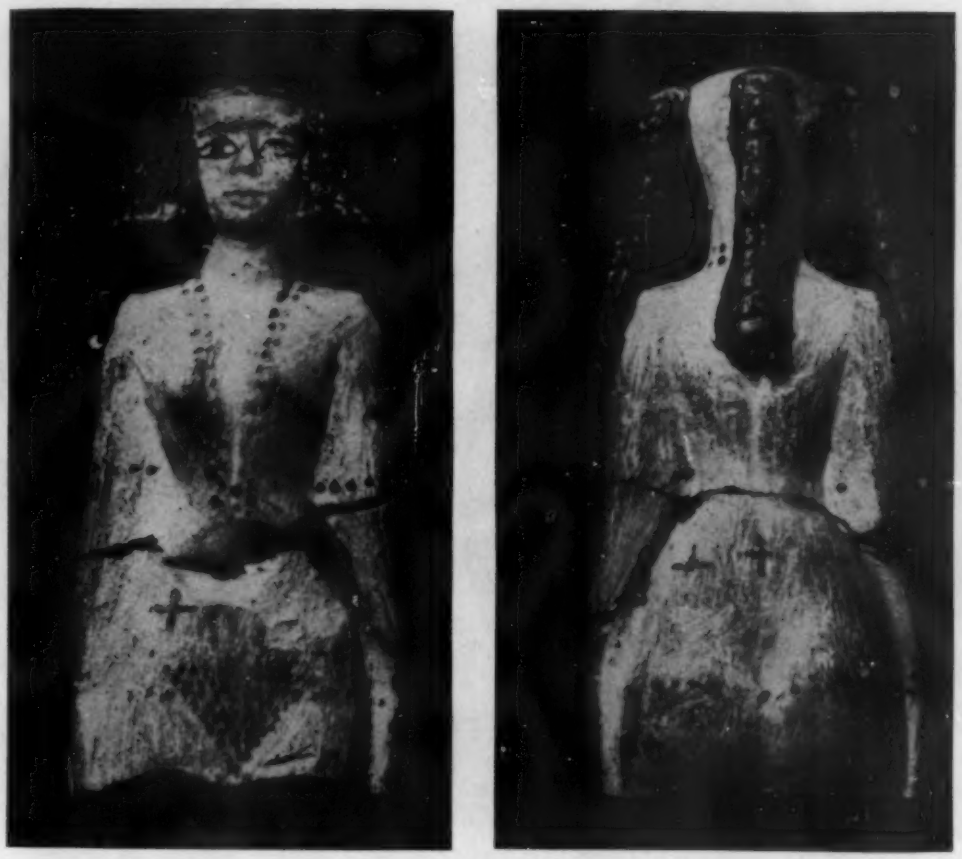


POTTERY VASE OF THE NEW KINGDOM, LEFT SIDE

PLATE IV

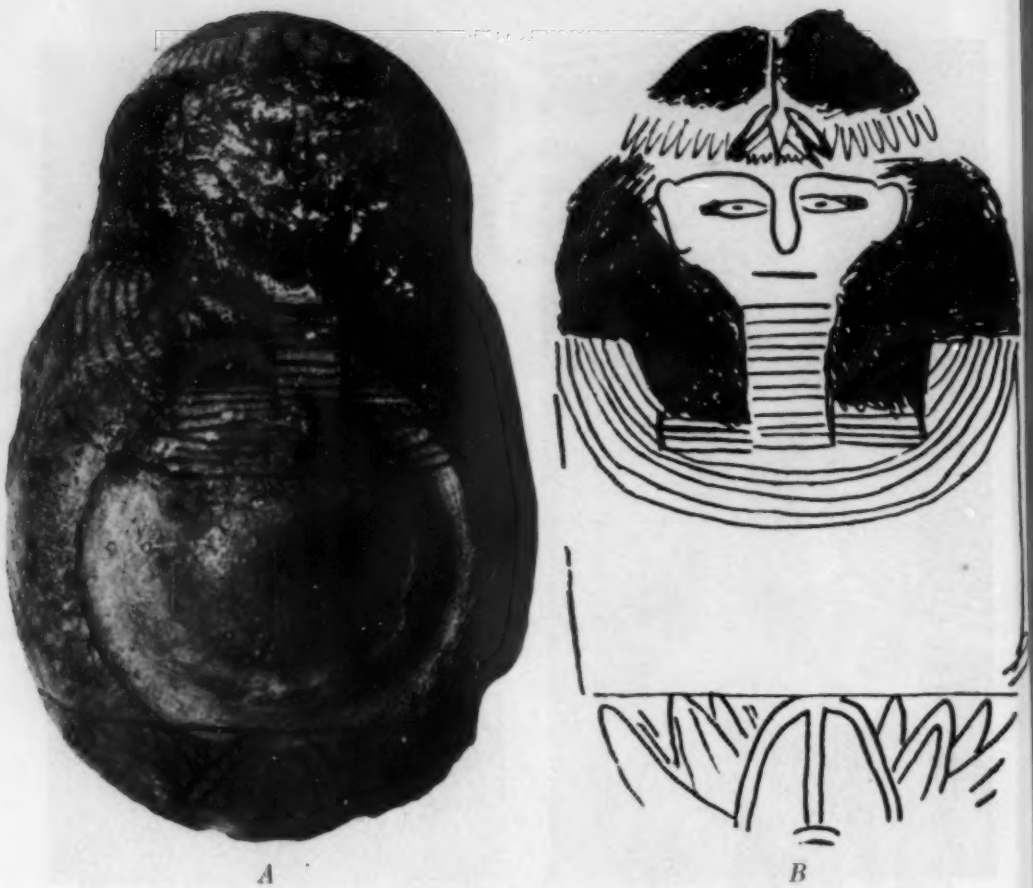
POTTERY VASE OF THE NEW KINGDOM, BACK

PLATE V



FRAGMENTS OF A MIDDLE KINGDOM STATUETTE OF A WOMAN

PLATE VI



A B

FREAK OF NATURE RETOUCHED BY THE HAND OF MAN

The abdomen of the woman is rendered in the form of a white "lotus" flower (*Nymphaea lotus* L.). From Deir el-Medineh. Nineteenth Dynasty.

PLATE VII

FAIENCE BOWL OF THE NEW KINGDOM

PLATE VIII

A *B*

STYLIZED WOODEN IDOLS IN THE FORM OF WOMEN, MIDDLE KINGDOM

bellies of these crudely shaped female figures is no less clear and unambiguous than the painted Ḥaṯḥor cows on that of the lady of the vase (Pl. I). For the universally beloved Taweris enjoyed very special favor among the womenfolk: she presided

FIG. 3

over the bedchamber, and it was she who assisted women in their hour of travail. Nothing, therefore, could be more understandable than to provide these rude, conventionalized, legless female idols with Taweris figures on the belly. In the same manner, the painter charged with the decoration of the Khawam vase sketched on the belly of the vessel a pair of Ḥaṯḥor cows, the animals sacred to another of the great protective guardians of women.

A purely ornamental function is performed by the leaping calf which is separated from the two Ḥaṯḥor cows by stylized plants at right and left (Pl. IV). It is well known that this calf motif[21] is typical of the period to which the Khawam vase must be assigned: the Amarna age and the Nineteenth Dynasty.

The two conventionalized plants, a papyrus (Pl. IV, *left*)[22] and a poppy(?) or a "southern lily"(?) (Pl. II, *left;* Pl. IV, *right*),[23] similarly occur thousands of times on monuments from the Amarna period and later. A comprehensive description and interpretation of these plants would require a separate article. It may here be noted, however, that the numerous small leaves which appear to be growing out of the stems are very probably intended to represent some type of stylized vine (possibly *Convolvulus*).[24]

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[21] Only a few examples can be mentioned: Prisse d'Avennes, *Histoire de l'art égyptien* (Paris, 1878–79), plate entitled "Art industriel. Amphores, jarres et autres vases" (middle left); Petrie, *Tell el Amarna* (London, 1894), Pl. IV; Borchardt, *Works of Art from the Egyptian Museum at Cairo*, Pl. XLVI; Frankfort and Pendlebury, *The City of Akhenaten*, Part II (London, 1933), Pl. XXX, 1 (bottom right); Frankfort, *The Mural Painting of El-Amarnah* (London, 1929), Pl. XIII, 1, etc.

[22] Cf. Nagel, *op. cit.*, p. 185: "une tige de papyrus autour de laquelle s'enroule une plante grimpante."

[23] Cf. n. 21, also Frankfort and Pendlebury, *City of Akhenaten*, Part II, Pl. XXIX, 6 (first fragment from top) and Petrie, *Tell el Amarna*, Pl. II (top, next to margin).

[24] Keimer, *Gartenpflanzen*, I (Hamburg, 1924), 179, esp. No. 6.

BABYLONIAN ASTRONOMY. II. THE THIRTY-SIX STARS

B. L. VAN DER WAERDEN

Our knowledge of Old Babylonian astronomy is rather scanty. The only text which can with certainty be dated as far back as the Hammurapi Dynasty is represented by the Venus tablets of Ammiṣaduqa, discussed elsewhere.[1] Two more texts written in the second millennium B.C. are extant: (*a*) Hilprecht's text HS 229, from Nippur; and (*b*) the so-called "astrolabes," lists of thirty-six stars connected with the twelve months of the year.

Some authors have maintained that Hilprecht's text proves the existence of a highly developed Old Babylonian scientific astronomy. We shall first dispose of this legend and then pass to a discussion of the far more important astrolabes. We shall see that Hilprecht's text is simply a mathematical exercise belonging to the prescientific stage of Babylonian astronomy. The astrolabes, on the other hand, represent the beginning of scientific astronomy: *they are the first attempt toward systematization of prescientific popular knowledge about stars appearing in the sky during the different seasons of the year.* It is true that the system was far from perfect, but it was an excellent starting-point.

Later texts, notably the two tablets of the series ^{mul}APIN, modified the scheme of the astrolabes and made the system more complete. By analyzing and comparing these texts, we shall be able to get an idea of the different periods of astronomical activity in Mesopotamia. We shall follow the successive stages of metamorphosis of the thirty-six stars from Old Babylonian times to the Hellenistic period, when they finally became mixed up with the twelve zodiacal signs and the thirty-six Egyptian decans. We shall see how they started their career as calendar stars in popular tradition, how they were incorporated in an exact scientific system, and how they finally became mysterious, divine powers, supervising everything that happens in heaven, on earth, and in the underworld.

[1] B. L. van der Waerden, "Babylonian Astronomy I," *Jaarboek, Ex Oriente Lux*, Vol. X (1948), 414.

I. HILPRECHT'S NIPPUR TEXT

Some lines of this text were published by Hommel.[2] They run as follows:

44,26,40 times 9 is 6,40. (Hence:)

13 *bêru* 10 *uš* is the star *šu.pa* distant beyond the star *ban.*

44,26,40 times 7 is 5,11,6,40. (Hence:)

10 *bêru* 11 *uš* 6½ GAR 2 *ammatu* is the star *gír.tab* distant beyond the star *šu.pa.*

A few words of explanation: the sexagesimal number 44,26,40 may be read as 44,26;40, which means

$$44 \cdot 60 + 26 + \tfrac{40}{60}.$$

If this is multiplied by 7, we get

$$5,11,6;40 = 5 \cdot 60^2 + 11 \cdot 60 + 6 + \tfrac{40}{60}.$$

The unit of length is, as in most mathematical texts, 1 GAR = 12 *ammatu* (cubits).

Sixty GAR are called 1 *uš*, and 30 *uš* are called 1 *bêru* (a distance of two hours of walking). Thus the number 5,11,6;40 GAR means 10 *bêru* 11 *uš* 6½ GAR 2 *ammatu*, as stated in the text.

Hommel's publication gave rise to a furious discussion between Kugler and

[2] *Münchner neueste Nachrichten*, August 27, 1908, Beilage 49, p. 459

Weidner[3] about the exactitude of measurement of star distances or of differences in rectascension in Old Babylonian times. Now that we know more about the text, this discussion appears futile. First of all, Thureau-Dangin pointed out[4] that the distances indicated in the text might well mean radial distances, if the wording of the text is taken literally. If this interpretation is correct, the numbers of the text are of course not measured, but purely speculative. Thureau-Dangin reminds us in this connection of Pythagorean speculations on distances of stars.[5] Also the Pythagorean "harmony of the spheres" presupposes that the distances between the planetary spheres have the ratios of simple whole numbers. These speculations might well be related to Babylonian cosmology and number speculation.

After Hommel's publication, the text was lost for some time, but in 1931 O. Neugebauer rediscovered it in Hilprecht's collection at Jena, and published the rest of it.[6] From this publication it becomes quite clear that the numbers of the text, no matter whether they mean radial or transverse distances, were not at all "measured with marvellous accuracy," as Weidner had asserted, but that the distances were assumed to be proportional to simple whole numbers (19:17:14:11:9:7:4), and that the sexagesimal numbers, which had given the impression of high accuracy, were only the result of division.

As a matter of fact, HS 229 is essentially a mathematical problem text of the same kind as many others, the only difference being that star distances were used instead of the usual amounts of money to be divided among seven brothers. The problem was: If it is 19 from the moon to the star *mul* (=Pleiades), and 17 from *mul* to *siba.an.na* (=Orion), 14 from *siba.an.na* to *gag.tag.ga* (Sirius?), 11 from *gag.tag.ga* to *ban* (the "bow," consisting of δ Canis Majoris and neighboring stars), 9 from *ban* to *Šu.pa*, 7 from *Šu.pa* to *gir.tab* (Scorpio), and 4 from *gir.tab* to the star *an.ta.gub* (the outermost star), and if the sum of all these distances is 2;0 (=120) *bêru*, what are the distances? Solution (of course): The given sum 2,0 *bêru* = 1,0,0,0 GAR was divided by 19 + 17 + 14 + 11 + 9 + 7 + 4 = 1,21; the result was 44,26;40 GAR. This was multiplied by 19, by 17, by 14, by 11, by 9, by 7, and by 4, and thus were found the distances from the moon up to the Pleiades, from the Pleiades up to Orion, etc.

Thureau-Dangin and O. Neugebauer inferred from the form of the signs that the text might have been written in the twelfth or eleventh century B.C. However, since the scribe Eriba-Marduk himself states that it is a copy, the original might well be older.

In any case, the text represents, as Thureau-Dangin says, the *prescientific* stage of Babylonian astronomical speculation, not the beginning of scientific astronomy.

II. THE STARS AS INDICATORS OF SEASONS IN EGYPT AND GREECE

Most important for the establishment of a well-ordered calendar and the fixing of the seasons is the observation of the annual risings of fixed stars.

In Egypt, the great star Sothis (Sirius) was hailed from early times as "Bringer of the New Year and of the Inundation." These words are written on a little ivory tablet from a First Dynasty royal tomb in Abydos.[7] The Nile flood, which normally

[3] For biography see E. F. Weidner, *Handbuch der babylonischen Astronomie* (Leipzig, 1915), p. 128.

[4] F. Thureau-Dangin, *Rev. Assyriol.*, XXVIII (1931), 86.

[5] Plinius *Hist. nat.* II. 19.

[6] O. Neugebauer, *Quellen und Studien zur Geschichte der Mathematik*, Abt. B, Vol. III (1936), 274.

[7] Philadelphia University Museum E 9403. Published by W. M. F. Petrie, *The Royal Tombs of the*

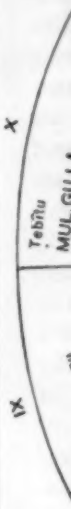
began a few days or weeks after the heliacal rising of Sirius, was for the Egyptians the most important event of the whole rural year, and so the day of the appearance of Sothis, the Bringer of the Flood, was celebrated in the whole kingdom.

However, Sothis was not the only important star. Lists of thirty-six constellations, the so-called "decans," which were supposed to rise at intervals of ten days throughout the year, can be found on coffin lids of the Middle Kingdom[8] and on ceilings of tombs belonging to kings of the New Kingdom.[9] An explanation of these ceiling inscriptions is found in Papyrus Carlsberg I, published by Lange and Neugebauer.[10] From this explanation it is seen that the risings, culminations, and settings of the decan constellations were supposed to determine not only the date but also the hour of the night. The idea was that twelve successive decans indicate by their culmination the twelve hours of the night. Each decan, ninety days after having culminated in the first hour of the night, disappears from the sky and reappears again from the subterranean world after seventy days of invisibility. Ten days later the next decan reappears, etc. Eighty days after its appearance in the east each decan begins to "work in the middle of the sky," i.e., to culminate in the twelfth hour, the eleventh hour, and so on, down to the first hour of the night. After one hundred and twenty days the decan "stops working," and the cycle begins again.

The scheme is very rough. The supposition that twelve decans culminate during the night is possible only if the mean difference in rectascension of two successive decans is nearly 15 degrees. On the other hand, because there are thirty-six decans, their mean difference in rectascension is 10 degrees. This is a clear contradiction. It was really no easy task for the souls of the dead to find their orientation in time by means of the obscure indications on the lids of their coffins! In any case, the number of thirty-six decans and the equal distribution of their dates of appearance over the year clearly shows that the decans were primarily meant to indicate by their rising or setting the day of the year and that the task of indicating the hour was placed upon their shoulders only afterward.

Also, in the well-known Greek parapegms, the stone calendars with 365 or 366 holes into which sticks could be inserted to ascertain the beginning of the moon-months, the rhythm of the year was primarily determined by the annual rising and setting of the fixed stars.[11]

Before the establishment of a regular official calendar, the importance of ob-



First Dynasty (London and Boston, 1900–1901), II, Pls. V 1 and VI *a* 2. Discussed by K. Sethe, "Die Zeitrechnung der alten Ägypter," *Nachr. Ges. Wiss. Göttingen* (phil.-hist. Kl.) (1919), p. 294; L. Borchardt, *Quellen und Forschungen zur Zeitbestimmung der ägyptischen Geschichte* (Berlin, 1917), I, 53; H. E. Winlock, "The Origin of the Ancient Egyptian Calendar," *Proceedings of the American Philosophical Society*, LXXXIII (1940), 457; and others. For the relation of Sothis to the Egyptian calendar see, above all, O. Neugebauer in *Acta Orientalia*, XVII (1938), 169, and *J. Near Eastern Studies*, I (1942), 396.

[8] A. Pogo, "Calendars on Coffin Lids from Asyut," *Isis*, XVII (1932), 6; "The Astronomical Inscriptions on the Coffins of Heny," *Isis*, XVIII (1932), 7; "Three Unpublished Calendars from Asyut," *Osiris*, I (1936), 500; "Der Kalendar auf dem Sargdeckel des Idy," in W. Gundel, *Dekane und Dekansternbilder* ("Studien der Bibliothek Warburg," Heft 19 [Glückstadt and Hamburg, 1936]).

[9] Tomb of Senmut: Pogo, *Isis*, XIV (1930), 301; H. E. Winlock, *Bull. Metropolitan Museum of Art* II (1928), 3, reprinted in *Excavations at Deir el Bahri* (New York, 1942). Cenotaph of Seti I: H. Frankfort, *Egypt Exploration Society Memoirs*, No. 39 (1933). Tomb of Ramesses IV: H. Brugsch, *Thesaurus inscriptionum aegyptiacarum*, Vol. I (Leipzig, 1883); H. O. Lange and O. Neugebauer, *Det Kgl. Danske Videnskabernes Selskab, Hist.-fil. Skrifter*, I, No. 2 (1940), 90. Analogous representations in the tombs of Ramesses VI, VII, and IX.

[10] *Op. cit.*

[11] A. Rehm, *Parapegma-Studien* (Abhandl. Bayer. Akad. der Wissen., München, Heft 19 [1941]).

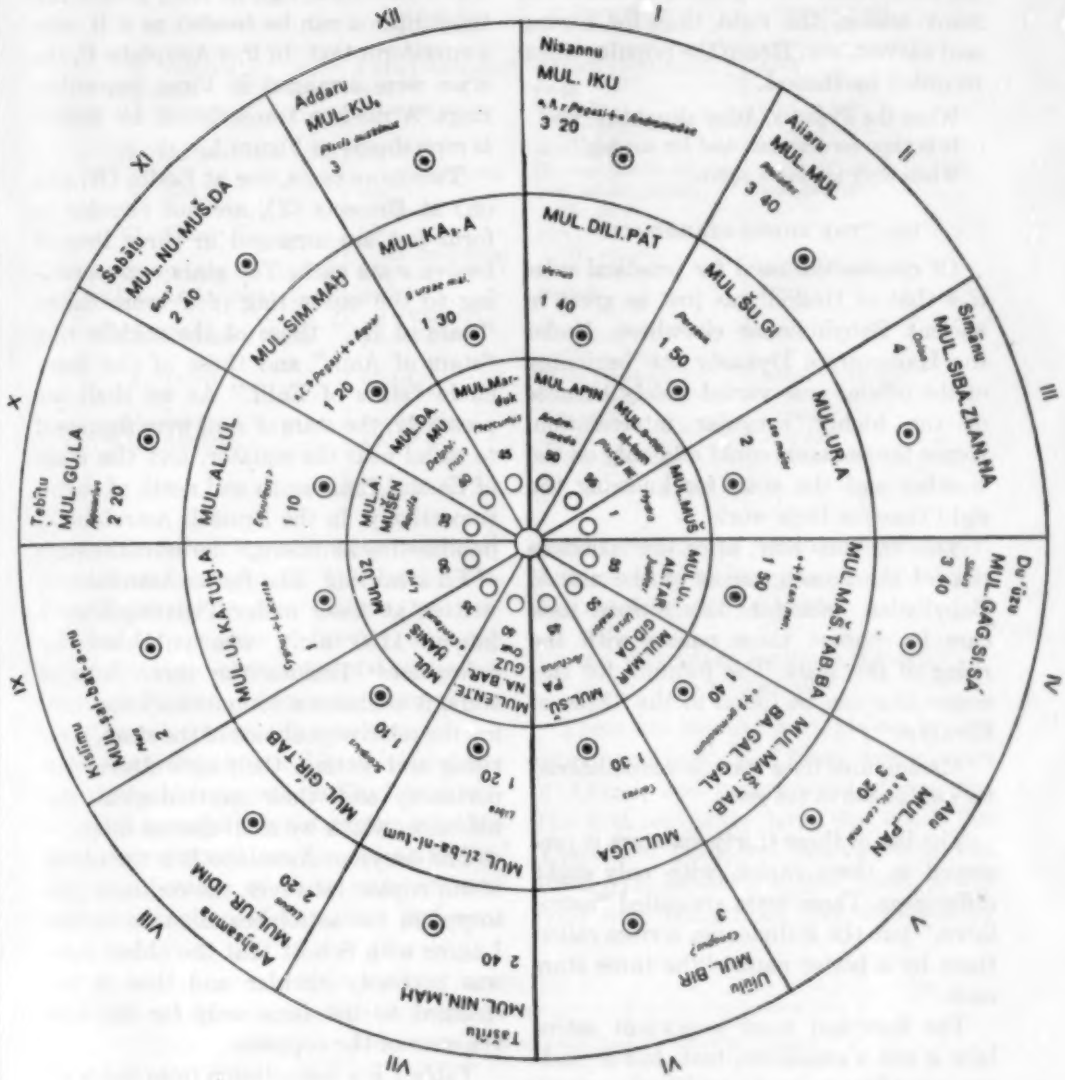


FIG. 1.—Astrolabe P, copied from A. Schott

serving the fixed stars was even greater. The peasant had no other means of knowing beforehand the beginning or end of the rainy season, the right time for sowing and harvest, etc. Hence the popular rules, recorded by Hesiod:

> When the Pleiades, Atlas' daughters, rise
> It is time for harvest, and for sowing
> When they go down again.

III. "THE THREE STARS EACH"

Of course, the need for practical rules like that of Hesiod was just as great in ancient Babylonia as elsewhere. Under the Hammurapi Dynasty the beginning of the official year varied widely because of the highly irregular intercalation. Hence the peasants could rely only on the weather and the stars for knowing the right time for their work.

This explains why, after the introduction of the month names of the unified Babylonian calendar, the scribes took care to connect these names with the rising of the stars. The formula for this connection can be found in the "Epic of Creation":

> Marduk fixed three stars (or constellations) for each month of the year.

The list of these thirty-six stars is preserved in three copies, with only slight differences. These texts are called "astrolabes," but the Babylonian scribes called them by a better name, "the three stars each."

The first and most important astrolabe is not a cuneiform text, but a modern compilation made by Pinches from different texts in the British Museum.[12] Most of these texts are now lost; only some small fragments were published by L. W. King, *Cuneiform Texts*, Volume XXXIII (1913), Plate 11–12. However, Pinches' transcription (P) is so accurate that there is in no case any doubt as to which cuneiform sign he read. Hence this transcription can be treated as if it were a cuneiform text. In this Astrolabe P, the stars were arranged in three concentric rings. A modern transcription by Schott is reproduced as Figure 1.

Two more texts, one at Berlin (B) and one at Brussels (Z), are not circular in form but are arranged in three lists of twelve stars each. The stars corresponding to the outer ring of P were called "stars of Ea," those of the middle ring "stars of Anu," and those of the inner circle "stars of Enlil." As we shall see presently, the stars of Anu were supposed to stand near the equator, and the stars of Ea and Enlil south and north of them, respectively. In the Brussels Astrolabe Z, published by Zimmern,[13] the list of the stars of Ea is missing. The Berlin Astrolabe B, written at Assur under Tiglath-pileser I (about 1100 B.C.), was published by Schroeder.[14] Besides the three lists of stars, it contains a commentary concerning the relative positions of the stars, their rising and setting, their agricultural importance, and their mythological significance, which we shall discuss later.

The Assyrian Astrolabe B is the oldest of our copies. However, the common prototype of the astrolabes must be earlier. I agree with Schott that the oldest form was probably circular and that it was changed to list form only for the convenience of the copyists.

Table 1 is a compilation from the texts P, B, and Z. The divergences of the three texts are indicated in parentheses. It will be seen that the differences are small; e.g.,

[12] T. G. Pinches, *J. Royal Asiatic Soc.*, 1900, p. 573. See also A. Schott, *Zeitschr. Deutsche Morgenl. Ges.*, LXXXVIII (1934), 302.

[13] H. Zimmern, *Z. Assyriol.*, XXXII (1918), 72; F. Thureau-Dangin, *Tablettes d'Uruk* (Paris, 1922), No. 13.

[14] O. Schroeder, *Keilschrifttexte aus Assur verschiedenen Inhalts* (Leipzig, 1920), No. 218, p. 119. Transcription in Weidner, *Handbuch*, p. 66.

TABLE 1

Month	Stars of Ea, Outer Ring	Stars of Anu, Middle Ring	Stars of Enlil, Inner Circle
I. Nisannu	1 *iku* [= DIL.GAN]	*dili.pát* [= DIL.BAT]	APIN
II. Airu	*mul*	*šu.gi*	*A-nu-ni-tum*
III. Simânu	*sib.zi.an.na*	*ur.gu.la* (P: *ur.a*)	*muš* [= SIR] (P: kùšú)
IV. Du^{z}ûzu	*gag.si.sá* [= KAK.SI.DI]	*maš.tab.ba* (Z: *maš.tab.ba.gal.gal*)	u_4*.al.tar* (B: šul.pa.ê)
V. Abu	*ban*	*maš.tab.ba.gal.gal* (Z: *bir*)	*mar.gid.da*
VI. Ululu	*bir* (B: *ka-li-tum*)	*uga* [= U.EL/TEG.GA] (B: ug_3*.ga*)	*šu.pa*
VII. Tešrîtu	*nin.maḫ*	*zi-ba-ni-tum*	*en.te.na bar.guz*
VIII. Araḫsamna	*ur.idim* [= UR.BAT]	*gír.tab*	*šarru*
IX. Kislîmu	*ṣal-bat-a-nu*	u_4*.ka.tuḫ.a* (Z: u_4*.ka.a*)	*uza*
X. Tebîtu	GU.LA	*al.lu*$_5$ [= AL.LUL] (B: *al-lu-ut-tum*)	*našru* [= ID.ḪU]
XI. Šabâtu	*nu.muš.da*	*šim.maḫ*	*da.mu*
XII. Addaru	*ku*$_6$ [= ḪA]	*ka*$_5$*.a* (B: *Marduk*)	*Marduk* (B: *ka*$_5$*.a*)

bir and *ka-li-tum*, *uga* and ug_3*.ga*, *ur.a* and *ur.gu.la* are synonymous. The word *mul* = "star" preceding the names will be omitted for the sake of brevity. In some cases, for the convenience of the reader, I have indicated old transcriptions of the same cuneiform signs in brackets.

In this transcription, I have left out the numbers which appear on Pinches' astrolabe (P), because it is not certain whether they were present on the old astrolabe. The signification of these numbers and the identification of the stars and constellations will be discussed presently. First we have to compare the astrolabes with other related star lists.

IV. THE STARS OF ELAM, AKKAD, AND AMURRU

There are extant two texts containing lists of twelve stars of Elam, twelve stars of Akkad, and twelve stars of Amurru. The first text is the large star list K 250 (*Cuneiform Texts*, Vol. XXVI [1909], Pls. 40–41), the second is K 8067 (*ibid.*, p. 44). Both were transcribed and discussed by

TABLE 2

No.	Stars of Elam	Stars of Akkad	Stars of Amurru
1		APIN	1 *iku*
2		*A-nu-ni-tum*	*šu.gi*
3		*sib.zi.an.na*	*muš*
4		u_4*.al.tar*	*gag.si.sá*
5		*mar.gid.da*	*maš.tab.ba.gal.gal*
6		*šu.pa*	*bir*
7		*zi-ba-ni-tum*	*nin.maḫ*
8	*gír.tab*	*ur.idim*	*šarru*
9		*uza*	*ṣal-bat-a-nu*
10	GU.LA	*našru*	*al.lu*$_5$
11	*n*[*u.muš.da*]	*da.mu*	*šim.maḫ*
12		*ni-bi-rum*	*ka*$_5$*.a*

Weidner (*Handbuch der babylonischen Astronomie*).[15] The lists are shown in Table 2.

The only new star appearing in these lists is ^{mul}*nibirum*. However, this is identical with ^{mul}*Marduk* and means Jupiter. This is clearly stated in the text ^{mul}APIN (*Cuneiform Texts*, Vol. XXXIII [1918], Pl. 2, col. I, ll. 36–38):

> When the stars of Enlil have finished, the great star shining faintly, that halves the sky and stays there, is ^{mul}*Marduk*, *nibiru*, ^{mul}*sag.me.gar* (=Jupiter); he changes his place and wanders along the sky.

The predicate "shining faintly" apparently contradicts the name "great star." However, the meaning of the whole sentence can be explained, according to Schaumberger, as follows: In the morning, when the stars of the northern sky have disappeared, the great star Jupiter, standing in the middle of the sky (in the meridian), will still be faintly visible.

Nearly the same sentence occurs already in the Astrolabe B (col. ii, ll. 29–32):

> The red star, that, when the stars of the night have finished, stays where the south wind comes from, halves the sky and stays there, is the god *nibiru*, *Marduk*.

So we may safely conclude that the identity, ^{mul}*Marduk* = *nibiru* = Jupiter, holds in our texts.[16]

We now see that all stars of Elam, Akkad, and Amurru are identical with those of the astrolabe lists and that in each case their order corresponds to the order of the twelve months in the astrolabe. Hence the stars of Elam, Akkad, and Amurru are month-stars, corresponding to the twelve months of the year. We shall see presently that the months are, in most cases, the months in which the stars rise heliacally, i.e., the months in which they appear for the first time in the morning. Needless to say, this applies only to fixed stars, not to the planets Venus (*dili.pát*), Mars (*ṣal-bat-a-nu*), and Jupiter (u_4.*al.tar* or *nibiru* = *Marduk*).

Now, what does "stars of Elam, Akkad, Amurru" mean? First of all, we can remark that the names Elam, Akkad, and Amurru correspond to the political situation in Old Babylonian times; hence these lists must be old. Secondly, the arrangement according to the paths of the stars of Ea, Anu, and Enlil, i.e., according to zones parallel to the equator, is more logical from a scientific point of view than the arrangement according to nations. For these reasons, I assume that the political arrangement was the primitive one and that it was replaced afterward by the more scientific arrangement in concentric rings.

Perhaps the expression "stars of Elam, Akkad, Amurru" indicates that different local traditions were used in forming the three lists. The Egyptians looked at Sirius, the Greeks at the Pleiades, as we saw from Hesiod; why should not the Elamites, Akkadians, and Amorites have hailed different stars as indicators of the seasons? I do not, of course, presume that the Elamites knew exactly twelve stars corresponding to the twelve months, the Akkadians twelve entirely different stars, and the Amorites twelve other stars. But there must have been popular traditions concerning the rising of stars during the year, peasant rules like Hesiod's, different in different regions.

It seems reasonable to suppose that the scribes of Hammurapi's time, who united the local gods of different cities into one great pantheon, who unified the calendar and codified the laws, also collected the local traditions concerning fixed

[15] Weidner informs me that he possesses unpublished texts of the same kind, different in some respects from the known texts.

[16] According to Schott (*Z. Assyriol.*, XLIII [1929], 124), ^{mul}*Marduk* sometimes indicates Mercury. However, in most cases it means Jupiter, and the predicate *nibiru* is never applied to Mercury. Why Jupiter was called the "red star" is obscure; perhaps "red" meant merely "faint."

stars and fitted them into one scheme. They drew up three lists of twelve stars each, stopping gaps by including planets and well-known circumpolar constellations such as *mar.gid.da* (Ursa Major). Some stars did not rise exactly in the months to which they were assigned, but the scribes did not bother much about these trifles, since their main aim was a fine symmetrical system. The prominent position of the main god Marduk was indicated by including his star twice in the list, under two different names: u_4*.al.tar* and *ni-bi-rum*.

At a later stage, the arrangement according to regions became obsolete and was abandoned in favor of a more scientific scheme. The correspondence of the stars to the months was left unchanged, but within each month the three stars were rearranged according to their northern or southern positions in the sky. We are not certain whether this rearrangement took place in the Old Babylonian or in the Cassite period.

V. WHICH STARS WERE MEANT?

How can we identify the stars enumerated in the astrolabe lists?

We have mentioned already the names of planets:

dili.pát = Venus
ṣal-bat-a-nu = Mars
u_4*.al.tar* = *Marduk* = Jupiter

Next, we can readily identify several zodiacal stars and constellations which occur in later planetary texts:

mul = *zappu* = Pleiades
maš.tab.ba.gal.gal = Gemini
kušú = Praesepe[17]
ur.gu.la = *ur.a* = Leo
šarru = Regulus
zi-ba-ni-tum = Libra
GU.LA = Aquarius
šim.maḫ = Pisces southwest (+stars up to ϵ Pegasi)
A-nu-ni-tum = Pisces northeast (+middle part of Andromeda)

The third and most important means of identification of constellations is furnished by the famous text BM 86378, the first tablet of the series ^{mul}APIN, published by King.[18] This text contains so much information about the heliacal rising, the daily rising, culmination, and setting, and the position of our stars, that Bezold, Kopff, and Kugler were able to identify nearly all major constellations, those of the astrolabe lists included, with a reasonable degree of certainty. Some minor corrections of their results will be indicated in Section X. The following identifications are considered as practically certain:

1 *iku* = Rectangle of Pegasus
APIN = Triangulum + γ Andromedae
šu.gi = Perseus (+north part of Taurus?)
sib.zi.an.na = Orion
muš = *ṣîru* = Hydra + β Caneri
gag.si.sá = Sirius
ban = $\tau\delta\sigma\epsilon\kappa\eta$ Canis Majoris + $\kappa\xi$(?) Puppis
mar.gid.da = Ursa Major
uga = *aribu* = Corvus
šu.pa = Arcturus
en.te.na bar.guz = Centaurus
ur.idim = Caput Serpentis
u_4*.ka.tuḫ.a* = Cygnus + $\alpha\xi\iota\delta\zeta\mu$ Cephei
.uza = *enzu* = Lyra
al.lu$_6$ = Procyon
našru = Aquila
ku$_6$ = *nûnu* = Fomalhaut or Piscis Austrinus

It is seen that quite a number of Babylonian configurations exactly cor-

[17] The identity *kušú* = Praesepe is proved by the observation text VAT 4956, published by P. V. Neugebauer and E. F. Weidner, *Berichte der Königlich Sächsischen Gesellschaft der Wissenschaften zu Leipzig*, Vol. LXVII (1915). The ideogram SAL + DIŠ + U = *kušú* (cf. A. Ungnad, *Archiv für Orientforschung*, XIV [1937], 251) was formerly read NAGAR, *nangaru*, or *pulukku*. The Akkadian equivalent *kušú* means an animal, perhaps a sort of crab.

[18] *Cuneiform Texts*, Vol. XXXIII (1913), Pls. 1–9. Discussion in Carl Bezold and August Kopff, Sitzungsberichte der Heidelberger Akademie der Wissenschaften (phil.-hist. Kl.), (1913), 11. Abh.; F. X. Kugler, *Sternkunde und Sterndienst in Babel*, Ergänzungshefte 1, 2, and *ibid.*, Ergänzungsheft 3 by J. Schaumberger (Münster in Westfalen [1913–35]); Weidner, *Archiv für Orientforschung*, VII (1931), 170.

respond to classical Greek ones. Thus, *maš.tab.ba.gal.gal* (Gemini) means "the great twins"; the Greeks called them Castor and Pollux. It is not quite clear whether *ur.gu.la* means "great dog," "lion," or "lioness" (Weidner), but *ur.a* probably means "lion."[19] *Šarru* (Regulus) means "king"; *ṣîru* means "serpent"; *aribu*, "raven." The Babylonian serpent carried its head somewhat higher than our Hydra (see Fig. 2). Again *zibanitu* (Libra) means "scales"; *našru* (Aquila), "eagle"; matter of fact, the configuration Triangulum+γ Andromedae had the form of a plough (Fig. 3). Andromeda was cut into three parts, belonging to APIN, *Anunitum*, and *ikû*, the rectangular field. *Anunitum* and *šim.maḫ*=*šinuntum* ("the great swallow") were much more extensive and impressive than our two small fishes (Pisces); *šim.maḫ* really looks like a great swallow (Fig. 3).

In the region of our Canis Major the Babylonians had an arrow (*gag.si.sá*) and

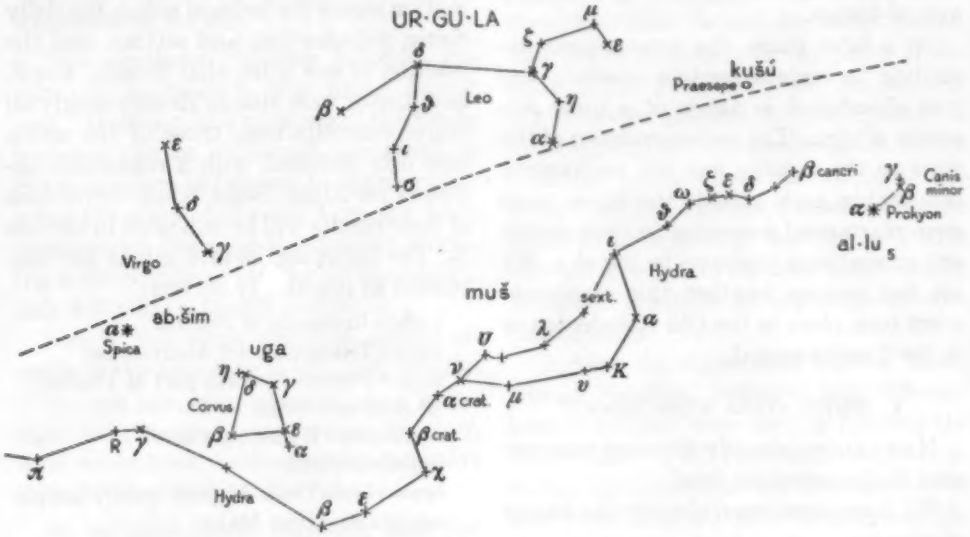


FIG. 2

and *nûnu*, "fish" (our Piscis Austrinus). In King's text BM 86378 we find a bull (*gu$_4$.an.na*) corresponding to our Taurus, a scorpion (*gír.tab*) corresponding to our Scorpio, and a goat-fish (*suḫurmašu*) corresponding to our Capricorn. The "true shepherd of the sky" (*sib.zi.an.na*) is our Orion. Ursa Major was, of course, a wagon (*mar.gíd.da*).

In other cases, the Babylonian conception was different from the Greek. Cygnus and the lower part of Cepheus formed a huge panther (*u$_4$.ka.tuḫ.a*). APIN probably means *epinnu*="plough"; as a bow (*ban*). Figure 4 shows the most probable reconstruction of these pictures. Instead of our Lyra, the Babylonians had a goat (*uza*=*enzu*). Hercules was a dog (*kalbu*), Aries a hired laborer (*ḫun.gá*=*agru*). The bright southern star Canopus was Ea's town Eridu (NUN^{ki} ^{d}*Ê-a*). The reasons for these identifications will be explained in Section X.

VI. COMPARISON BETWEEN THE ASTROLABES AND ^{mul}APIN

The first tablet of ^{mul}APIN[20] contains the following list of dates of heliacal rising:

[19] Cf. Ungnad, *loc. cit.*, n. 17 above.

[20] See n. 18 above.

I	1	^{1a}*ḫun.gá* rises
	20	*gàm* rises
II	1	*mul* rises
	20	*is li-e* rises
III	10	*sib.zi.an.na* and *maš.tab.ba.gal.gal* rise
IV	5	*maš.tab.ba.tur.tur* and *al.lu$_5$* rise
	15	*gag.si.sá* and *muš* and *ur.gu.la* rise
V	5	*ban* and *šarru* rise
VI	10	NUN^{ki} and *uga* rise

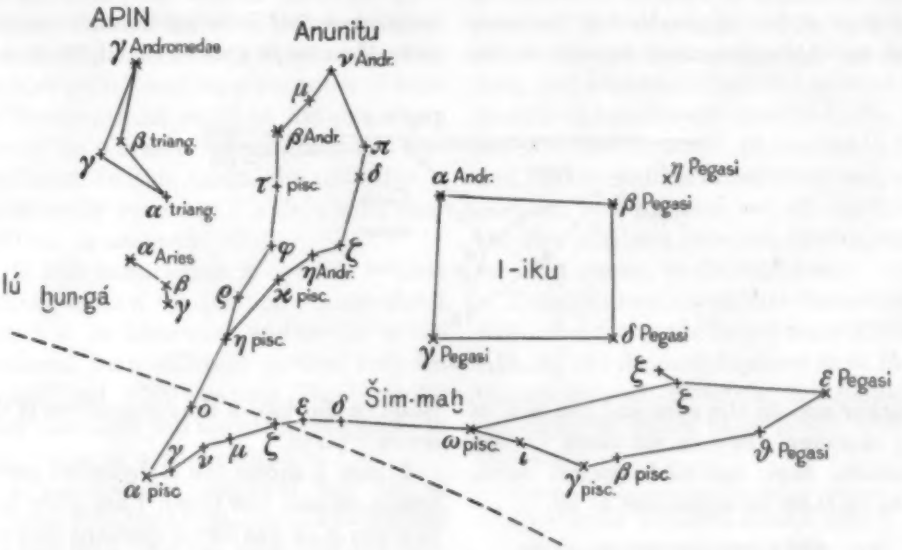


FIG. 3

	15	*šu.pa* rises
	25	*ab.šim* rises
VII	15	*zibanitu* and *ur.idim* and *en.te.na bar.guz* and *kalbu* rise
VIII	5	*gír.tab* rises
	15	*uza* and *gab gír.tab* rise
IX	15	*u$_4$.ka.tuḫ.a* and *našru* and PA.BIL.SAG rise
X	15	*šim.maḫ*, *ši-nu-nu-tum*, *im.šeš* rises
XI	5	GU.LA and 1 *iku* and *lu-lim* rise
	25	*A-nu-ni-tum* rises
XII	15	*ku$_6$* and *šu.gi* rise

There are thirty-six names in the list, just as in the astrolabes. In order to obtain this number, the author of the text has named one constellation by three synonymous names: *šim.maḫ* = *ši-nu-nu-tum* = *im.šeš* (month X).

The new constellations which occur in this list are:

^{1a}*ḫun.gá* = *agru* = Aries
gàm = *gamlu* = Auriga or Capella
is li-e ("the bull's jaw") = Hyades + Aldebaran
maš.tab.ba.tur.tur = ι + ν Geminorum(?)
NUN^{ki} = *Eridu* = Canopus
ab.šim = Spica
UR.KU = *kalbu* = Hercules
gab gír.tab = Antares
PA.BIL.SAG = Sagittarius
lu-lim ("the deer") = Cassiopeia without β

In Section X we shall see that the dates of rising of this list were approximately correct for Babylon about 1300–1000 B.C., if the rising of ^{1a}*ḫun.gá* (Aries) is taken as the beginning of the stellar year, and if the day of rising of each constellation is defined as the date of the appearance of its first visible star. In most cases, it would not make much difference if we had made the computation for, say, 1600 B.C. So we can use this text for checking whether the

astrolabe constellations actually rose in the months assigned to them.

If we compare the astrolabe list with that of ^{mul}APIN, we see that they have twenty-four constellations in common. Eleven of these rise in exactly the same months according to both lists. In seven cases the difference is only one month, which may be due to precession, or to a different choice of the beginning of the year, or simply to random deviations of the days of first appearance of the same star, for this appearance depends on the weather and on the eyes and the skill of the observer. Only in six cases (1 *iku*, *Anunitu*, *šu.gi*, *maš.tab.ba.gal.gal*, *šarru*, *al.lu*$_5$) is there no agreement at all.

VII. THE PATHS OF THE STARS OF ENLIL, ANU, AND EA

The text ^{mul}APIN, as Schott has seen, follows very closely the system of the astrolabe lists, but improves on it and puts many stars in the right place. This text begins with a catalogue of thirty-three stars of Enlil, twenty-three stars of Anu, and fifteen stars of Ea. As Bezold has seen, the stars of Anu stand in a belt from about 15 degrees north to about 15 degrees south of the equator; the stars of Enlil lie north of this "path," and those of Ea south of it. Schaumberger determined the limits of the three "paths" more accurately on the basis of a statement in the same text implying that the sun dwells exactly three months in each path; he found the limits to lie at $\pm 16° 40'$ north and south.[21] The best agreement with the star catalogue is reached if the limits are assumed to lie near 17 degrees north and south.

Still, the agreement is not perfect. The constellation *ban*, the "bow," is taken to Anu, whereas it should belong to Ea. Schaumberger supposes that the Babylonians did not wish to separate *ban*, the "bow," from *gag.si.sá*, the "arrow." But why not assign both of them to Ea, as the astrolabes did? It is worth while to consider the case in greater detail, because it bears on the date of the composition of the series ^{mul}APIN.

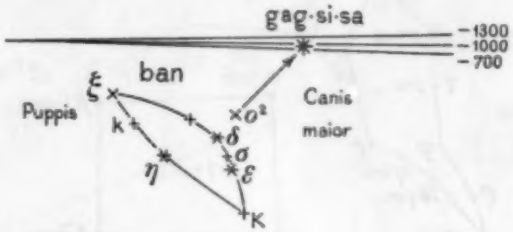


FIG. 4

Figure 4 shows the Babylonian arrow (*gag.si.sá*) and bow (*ban*). I am quite sure that *gag.si.sá* was Sirius (perhaps plus another star) and that *ban* was in the region of δ Canis Majoris; the rest of the picture is only a conjecture. The three lines indicating possible limits of the domain of Anu are drawn at a distance of 17 degrees from the equator for the years −1300, −1000, and −700. We know that one copy of the second tablet of ^{mul}APIN was written in 687 B.C., and that the observations of heliacal risings were made between −1400 and −900, probably even between −1300 and −1000. Hence the series was composed between −1400 and −700. Now before −1000 it would be perfectly unreasonable to include *gag.si.sá* and *ban* in the region of Anu, because

[21] Schaumberger, Ergänzungsheft 3 zu Kugler, *Sternkunde*, p. 322.

both of them clearly belonged to Ea.[22] Between −800 and −700 it would still be strange, but it would be possible as far as Sirius is concerned. Hence it seems likely that the list of stars was drawn up not long before 700 B.C.

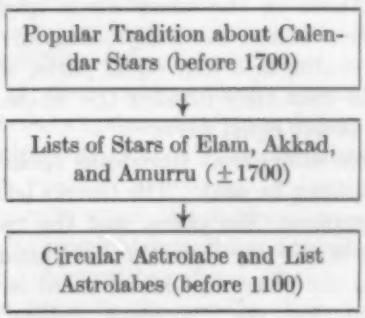
One could also think of solving the difficulty by shifting the limit of Anu's region toward the south. But then another difficulty would arise: Why were *gír.tab* (Scorpio) and its main star *gab gír.tab* (Antares) included in Ea's domain? About 700 B.C. Antares stood quite close to Ea's path,[22] and since a number of stars of Scorpio stand south of Antares, there would be a reason for assigning the constellation to Ea. Again, the difficulty is most easily overcome if a date quite near 700 B.C. is assumed.

If this assumption is correct, ^{mul}APIN proves to be a compilation—made about 700 B.C. or somewhat earlier—in which material from different periods between −1400 and −700 was used. This compilatory character will appear more clearly in the course of our investigation.

Schaumberger compared the list of ^{mul}APIN with the astrolabes and found that no less than fourteen constellations were placed differently.[23] In most of these cases, the astrolabes are wrong, no matter whether the computation is made for 1600 or 1100 B.C. How can we explain this?

In my opinion, we take the wrong point of view if we suppose that the astrolabe scribe had in mind a distinct division of the sky into three clearly limited zones. He had the lists of the stars of Elam, Akkad, and Amurru, and he wanted to rearrange the stars according to their northern or southern positions. He was not a revolutionist or a heretic: he did not change the months in which the stars were supposed to rise, because Marduk himself had "fixed the three stars for each month." Now what could he do? He could only assign, within each month, the northernmost star to Enlil, the southernmost to Ea, and the middle star to Anu. In this way, the order of the three stars in months V, VI, VIII, X, and XI is perfectly well explained. If we take it for granted that Mars, for some reason or other, should belong to Ea, Venus to Anu, and Jupiter to Enlil, the order of the remaining two stars in months I, IV, IX, and XII is also correct. In months II, III, and VII the southernmost stars *mul, sib.zi.an.na,* and *nin.maḫ* are all right, but the two northern ones are interchanged, for what reason we do not know.

Thus, our hypothesis that the astrolabe was derived from the lists of stars of Elam, Akkad, and Amurru explains most facts, though not all. However, the historical development seems to be pretty well established:


Popular Tradition about Calendar Stars (before 1700)
Lists of Stars of Elam, Akkad, and Amurru (±1700)
Circular Astrolabe and List Astrolabes (before 1100)

VIII. THE NUMBERS ON THE CIRCULAR ASTROLABE

The numbers are reproduced in Figure 1. In the outer ring they rise from 2 to 4 with equal differences of 0;20; and then fall again in the same way. The numbers in the middle ring are one-half, in the inner circle one-quarter of those in the

[22] Here are the declinations of Sirius and Antares, i.e., their distances from the equator:

	−1300	−1000	−700
Sirius	−17.7	−17.2	−16.7
Antares	−13.3	−14.9	−16.4

[23] Schaumberger in Kugler, *op. cit.*, p. 326.

outer ring. Since the maximum 4 is attained in month III, i.e., in early summer, it is clear that the numbers have something to do with the duration of daylight.

This is confirmed by a comparison with ^{mul}APIN, where the same numbers reappear, inserted in the list of heliacally rising stars, e.g.,

(IV 15) *4 ma-na en.nun u_4-me 2 ma-na en.nun ge_4*

which means, "(Du$^{\flat}$ûzu 15) 4 mana is a day watch, 2 mana a night watch."

As is well known, day and night were divided into three watches each, and a mana is a weight of about one pound. Thus, our sentence means, as Neugebauer[24] was the first to see: In order to define the length of a day watch or night watch at the summer solstice, one had to pour four mana or two mana of water into a water clock; its emptying indicated the end of the watch.

Now, if the numbers on the astrolabe have the same signification, those in the outer ring must mean day watches, those in the middle ring half-watches, and those in the inner circle quarter-watches. Hence the Babylonians divided each watch into four equal parts, which means that they divided the whole day into twelve equal parts.

This shows that Herodotus spoke the truth when he said: "The Greeks learned the gnomon, the polos, and the twelve parts of the day from the Babylonians." As to the gnomon, his statement is confirmed by the "gnomon tables" of ^{mul}APIN.[25] On the other hand, the partition of day and night into twelve parts is found not only in the astrolabes, but on an Assyrian ivory prism as well.[26]

We do not know whether the numbers on Astrolabe P are a later addition. However, there is some evidence that they might come from an old source, for in several texts, discussed by Kugler and Schaumberger,[27] the same numbers are multiplied by 4 and connected with the rising and setting of the moon. The oldest and at the same time the most complete of these texts is the fourteenth tablet of the great omen series "Enuma Anu Enlil," which is entirely devoted to these schematic lunar calculations.

In all these texts, the leading idea is *to compute the duration of day and night and the time of the rising and setting of the moon by means of rising and falling arithmetic progressions.* We have already found similar arithmetic progressions in one of the Venus tablets of Ammiṣaduqa belonging to the same omen series. Hence the simplest assumption would be that this idea originated in the time when the great omen series was composed, i.e., between 1400 and 900 B.C., and that from this source the tables were transferred to the later compilations I.NAM GIŠ.ḪAR[28] and ^{mul}APIN.

This would also explain how it was possible that in each of these younger texts two different values of the ratio of the longest day to the shortest night can be found, a problem which worried Neugebauer very much.[29] My explanation is that the great omen series started from the very primitive ratio 2:1, but that afterward the more accurate value 3:2 became known. In this case again ^{mul}APIN proves to be a compilation from different sources.

Older texts (Pinches' astrolabe and the

[24] O. Neugebauer, *Isis*, XXXVII (1947), 40.

[25] E. F. Weidner, *American Journal of Semitic Languages*, XL (1924), 198.

[26] S. Langdon, *Babylonian Menologies* (London, 1935), p. 55. The interpretation of the numbers on the ivory prism as durations of 1, 2, 3, . . . , 12 parts of the day was first given by G. K. Fotheringham, *The Observatory*, No. 703 (1932), p. 338.

[27] *Op. cit.*, II, 45; Ergänzungshefte, pp. 102 and 279.

[28] Kugler's text K 2164+2195+3510 was the second tablet of the series I.NAM.GIŠ.ḪAR. It was written about 700 B.C. by *Nabu-zuqup-kēnu*.

[29] See n. 24 above.

fourteenth tablet of "Enuma Anu Enlil") consistently placed the longest day on III 15, whereas the later texts (I.NAM.-GIŠ.ḪAR and ^{mul}APIN) prefer IV 15. Either approximation is equally good or bad, for sometimes the summer solstice took place in month III and sometimes in IV. However, it was a bad mistake of the scribe of ^{mul}APIN to combine the statement that IV 15 is the longest day with the assertion that Sirius rises on IV 15, for Sirius would rise three weeks after the summer solstice.

IX. THE THIRTY-SIX STARS IN ^{mul}APIN

Let us now return to the list of thirty-six heliacally rising stars in ^{mul}APIN, reproduced in Section VI. Immediately following this list, that text gives a list of date differences, concerning only the brightest stars, as follows:

From the rising of *gag.si.sá* 55 days until the rising of NUN^{ki};

From the rising of *gag.si.sá* 60 days until the rising of *šu.pa*;

From the rising of *šu.pa* 10 days until the rising of *ab.šin*; etc.

The differences are in accordance with the preceding list, if the year is assumed to contain just twelve months of thirty days each.

The curious fact that the dates of the first list from IV 5 onward are divisible by 5 but not by 10, can be explained as follows:

Suppose that there had been an original list of observed date differences, beginning (as did the second list) with Sirius and extending a whole year of 365 days until the next rising of Sirius. Assume that these differences were rounded off with a few exceptions to multiples of ten days, reckoned from Sirius. Suppose further that the author of our text wanted to give dates instead of date differences, using an artificial year of twelve months of thirty days each, beginning with the rising of ^{10}*ḫun.gá*. He could retain the differences of the original list, writing, however, I 1 and II 1 instead of XII 30 and I 30. Thus he automatically got dates divisible by 10 for months I, II, and III, but from IV 5 onward he arrived at dates divisible only by 5.

By the same operation in the inverse direction, we can reconstruct the original list of date differences. It proves convenient to sum up all differences so that we get differences of all other stars with respect to Sirius. The final check on this reconstruction is that it agrees much better with modern calculation than the list of dates given in the text.

The reconstructed list is given in the first two columns of Table 3. The next three columns give the time of appearance of the Babylonian constellations, calculated by means of Schoch's formulas[30] for the first rising star of the constellation, and finally the difference (Babylonian minus modern). The times of appearance are given in days after the day on which Sirius rises, which day is known with great accuracy from ancient observations. The resulting difference or "error" is the sum of three independent (unknown) terms: (*a*) a systematical error due to the inexactness of Schoch's formula for the "arcus visionis" and to our ignorance of the years in which the observations were made; (*b*) random deviations of the Babylonian observations from their mean values owing to the varying clearness of the sky and to other accidental causes; (*c*) the error of rounding off the observed values to multiples of 10. The root-mean-square or "standard" error of this rounding-off is nearly 3, and the sum of the other errors proves to be of the same order of magnitude.

[30] C. Schoch, *The Arcus Visionis in the Babylonian Observations* (Oxford, 1924).

The errors could be reduced still more by making the arcus visionis smaller during the dry season and larger during the rainy season (from NUN^{ki} to *gàm*), when conditions for visibility of stars at the horizon are less favorable.

doubt. For these it makes little difference (two days at most) whether one computes their rising for Babylon or Nineveh, for 1000 or 700 B.C. It was found that agreement between text and calculation could be reached only if the date of rising of any

TABLE 3

BABYLONIAN		MODERN		BABYLONIAN
Constellation	Time	First Star	Time	"Error"
gag.si.sá	0	Sirius	0	—
muš	0	β Cancri	8	−8
ur.gu.la	0	ε Leonis	8	−8
ban	20	δ Can.mai	18	2
šarru	20	Regulus	19	1
NUN^{ki}	55	Canopus	50	5
uga	55	γ Corvi	—	—
šu.pa	60	Arcturus	62	−2
ab.šin	70	Spica	70	0
zibanitum	90	α Librae	95	−5
ur.idim	90	δ Serpentis	—	—
en.te.na bar.guz	90	γ Centauri	89	1
kalbu	90	η Herculis	—	—
gir.tab	110	γ Scorpii	104	6
uza	120	Vega	121	−1
gab gir.tab	120	Antares	117	3
u$_4$.ka.tuḫ.a	150	δ Cygni	140	10
našru	150	ζ Aquilae	146	4
PA.BIL.SAG	150	γ Sagittarii	144	6
šim.maḫ	180	ε Pegasi	186	−6
GU.LA	200	β Aquarii	190	10
1 *iku*	200	β Pegasi	199	1
lu-lim	200	γ Cassiopeiae	193	7
An-nu-ni-tum	220	β Andromedae	229	−9
ku$_6$	240	Fomalhaut	234	6
šu.gi	240	γ Persei	238	2
ḫun.gá	260	α Arietis	262	−2
gàm	280	Capella	277	3
mul	290	Pleiades	297	−7
is li-e	310	Aldebaran	314	−4
sib.zi.an.na	330	γ Orionis	339	−9
maš.tab.ba.gal.gal	330	Castor	336	−6
maš.tab.ba.tur.tur	355	ι Geminorum	—	—
al.lu$_5$	355	Procyon	361	−6

X. THE DATE AND PLACE OF OBSERVATION

The modern dates were computed for Babylon −1000. Why not for −700, say, and why not for Nineveh or Kalḫu? This is a long story, which I shall try to summerize in a few words.

At first I restricted myself to constellations near the zodiac, identified beyond all

constellation was defined to be the date of appearance of the first visible star. If this was done, the differences between text and calculation were always smaller than ten days, and for bright stars the differences were even less. By applying the same standards to other constellations of doubtful identity near the zodiac, I obtained the following results:

muš = Hydra + β Cancri (in agreement with Kugler)

šu.pa = Arcturus alone, not Boötes

šim.maḫ = Pisces west + $\epsilon\zeta\vartheta$ Pegasi

Anunitum = Pisces northwest + $\eta\zeta\delta\pi\nu\mu\beta$ Andromedae

al.lu$_5$ = Procyon[21] (in agreement with Weidner)

Next I extended the investigation to constellations farther from the zodiac. I found that

lu-lim = $\alpha\gamma\delta\epsilon$ Cassiopeiae (without β)

This explains why the text A0 647δ mentions "the four stars of *lu-lim*." Furthermore, *lu-lim* rises in Assyria at a much earlier date than in Babylon, so *Assyria must be excluded.*

Also for other stars the agreement was better for Babylon than for Assyria. For this reason, I have made subsequent computations only for Babylon, first for 1000 and 700 B.C., afterward, as 700 proved impossible, also for 1300 B.C.

The next results were:

ku$_6$ = Piscis Austrinus or Fomalhaut alone (in agreement with Kugler)

NUN^{ki} = Canopus

The text asserts that NUN^{ki} rises fifty-five days after Sirius, which is almost correct before 1000 B.C., but which becomes impossible after 900 B.C. On the other hand, the assertion that *ku*$_6$ rises 240 days after Sirius is possible only after 1400 B.C.

Most identifications previously given by Kugler and by Bezold and Kopff can be confirmed. However, in the following cases I am obliged to differ from Kugler:

1 *iku* = Rectangle of Pegasus

ur.idim = Serpens or Caput Serpentis

maš.tab.ba.tur.tur ("the small twins") = $\iota + \nu$ Geminorum (probably)

u$_4$*.ka.tuḫ.a* = Cygnus + $\alpha\xi\iota\delta\zeta\mu$ Cephei

[21] It is true that *al.lu*$_5$ sometimes represents the *zodiacal sign* Cancer, probably because the daily rising of this sign takes place at the same time as that of the bright star Procyon, but in this context *al.lu*$_5$ cannot mean the *constellation* Cancer, because this constellation rises heliacally several weeks too late.

Reconsidering the results of the calculations for all thirty-four constellations for the years 1300, 1000, and 700 B.C., I found that *the observations were certainly made between* 1400 *and* 900, and that the best agreement was obtained for the years between 1300 and 1000 B.C. The differences between text and calculations were so small for these years that we are bound to conclude that the observations were made with considerable care, probably over a period of several years.

XI. ASTRONOMICAL SCIENCE IN THE GREAT OMEN PERIOD

These results show that not only the period 1400–900 was the classical period of omen astrology but that there were scientific astronomers at work as well, making careful observations of the annual rising and the daily rising, setting, and culmination of fixed stars. Still, our knowledge concerning this period is rather limited. We know for certain only the following facts: (*a*) composition of the great omen series "Enuma Anu Enlil";[22] (*b*) accurate observation of the heliacal rising of stars; (*c*) observation of daily rising, setting, and culmination; (*d*) composition of the astrolabes before 1100 B.C. Moreover, we can ascribe to this period with a certain degree of probability (*e*) a very primitive representation of Venus phenomena by arithmetic series and constant differences between successive phenomena (sixty-third tablet of the great omen series); (*f*) computation of daylight and night by rising and falling arithmetic series, starting from the crude extreme ratio 2:1; (*g*) computation of the rising and setting of the moon by rising and falling arithmetic series (fourteenth tablet of the great omen series); (*h*) speculations on distances of fixed stars (Hilprecht's text).

[22] See Weidner, *Archiv für Orientforschung*, XIV (1937), 175 and 176.

Strictly speaking, *e*, *f*, *g* might be later additions to the omen series, and *h* might be older. However, I have the very strong impression that *e*, *f*, *g*, and *h* belong to the same stage of primitive mathematical astronomy.

It would be very desirable indeed to have more authentic texts from this important period. The famous symbols on the boundary stones are of little help, since we do not know exactly what they mean. Clearly they are all symbols of gods, and their purpose was to invoke a curse on those who might violate the rights of owners; but which of these symbols indicated stars and which did not, we do not know. Thus, the Scorpion might be just an earthly scorpion, considered as a symbol of a god, or it might be the zodiacal Scorpion.

Let us now return to the thirty-six stars of the astrolabes.

XII. ASTROLABE B, STAR MYTHOLOGY, AND DIODORUS

Astrolabe B, after having mentioned the stars of Ea, Anu, and Enlil, and having connected them to the twelve months of the year, gives thirty-six statements on simultaneous risings and settings, of the following kind:

1 *iku* rises and *nin.maḫ* disappears
dili.pát rises and *zibanitum* disappears
APIN rises and *en.te.na bar. guz* disappears, etc.

The stars thus linked together always stand just six months apart in the astrolabe scheme. This means that every star is supposed to be visible during six months and invisible during six months.

Now this is sheer mythology. Zodiacal stars are visible ten or eleven months, and more northern stars even longer. Also for daily risings and settings the statements in the text are nonsense.

Myths have a longer life than astronomical theories, and so we must not be astonished to find the same star myth, enriched and modified, in Diodorus:

> Under the course in which these planets move are situated, according to them, thirty stars, which they (the Chaldeans) designate as "counselling gods"; of these one half oversee the regions above the earth and the other half those beneath the earth, having under their purview the affairs of mankind and likewise those of the heavens; and every ten days one of the stars above is sent as a messenger, so to speak, to the stars below, and again in like manner one of the stars below the earth to those above, and this movement of theirs is fixed and determined by means of an orbit which is unchanging for ever. Twelve of these gods, they say, hold chief authority, and to each of these the Chaldeans assign a month and one of the signs of the zodiac, as they are called. And through the midst of these signs, they say, both the sun and moon and the five planets make their course. . . .
>
> Beyond the circle of the zodiac they designate twenty-four other stars, of which one half, they say, are situated in the northern parts and one half in the southern, and of these those which are visible they assign to the world of the living, while those which are invisible they regard as being adjacent to the dead, and so they call them "Judges of the Universe."[33]

We do not know how far we can rely upon Diodorus, but in any case he must have had a "Chaldean" source. Let us call the star-gods alluded to in his source the "Chaldean Decans."

Clearly the number thirty must be an error, for if each time after ten days one star disappears and one rises, at the end of the year thirty-six stars will have disappeared and risen again. This is confirmed by simple addition: twelve stars in the zodiac and twenty-four stars north and south of it are thirty-six stars.

The next question is whether the thirty-six Chaldean Decans have any-

[33] Diod. ii. 30–31.

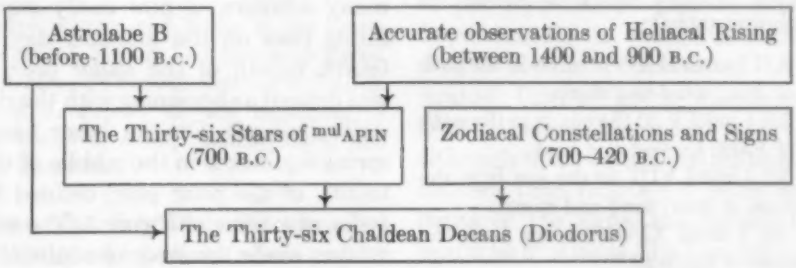
thing to do with the Egyptian decans. As far as I can see, they have in common only the fact that every ten days one decan rises and one sets. On the other hand, Diodorus says that at any moment half of the stars are above the earth and half of them in the subterranean world, which means that each star is supposed to be visible during six months and invisible during six months, like those of Astrolabe B, whereas the Egyptian decans dwell only seventy days in the subterranean world. Furthermore, the thirty-six stars of Diodorus are connected with the zodiac, and the zodiac is of Babylonian origin, as we shall see presently. Therefore, I am inclined to believe that Diodorus is really telling a Babylonian myth.

The original form of this myth, as recorded in Astrolabe B, already contained the following elements: There are thirty-six star-gods, half of them visible, half invisible; three times a month one of the visible gods goes to the subterranean world and one god returns from there. In this original form, there is no mention of the zodiac; as a matter of fact, only a few zodiacal constellations are mentioned in the astrolabes. The thirty-six stars were distributed according to the zones of Ea, Anu, and Enlil, not related to the zodiac but to the equator. In the later form of the myth recorded by Diodorus, the twelve zodiacal constellations were included among the thirty-six gods, and the twenty-four other constellations were distributed in zones north and south of the zodiac.

The same shift from the equatorial to the ecliptical system can be observed in scientific astronomy. Whereas in ^{mul}APIN (700 B.C.) the zones of Ea, Anu, and Enlil still prevail, later texts (since 600 B.C.) always determine positions of stars and planets with respect to the ecliptic. In the lunar and planetary tables of the Seleucid period, longitude and latitude are the only co-ordinates used.

Thus, Diodorus' story fits perfectly into the frame of Babylonian star mythology as influenced by scientific astronomy.

The thirty-six heliacally rising stars of ^{mul}APIN represent an intermediate stage between the astrolabes and the Chaldean Decans of Diodorus, for there are already among them eleven of the twelve traditional zodiacal constellations, and they no longer have any connection with the zones of Ea, Anu, and Enlil; but the goat-fish (*suḫurmašu* = Capricorn) is still missing, and the relation to the zodiac is not yet established. Thus, we have the following scheme of development:



The property of the Chaldean Decans that one of them rose every ten days made them fit to be assimilated to the Egyptian decans. This assimilation was performed in the decan lists of Hellenistic astrology. The Hellenistic decans were—like those of Diodorus—mighty, divine powers with supervision over everything that happens in heaven and on earth.

However, the relation of the decans to the zodiac is quite different, for each Hellenistic decan reigns over a part of the zodiac of 10 degrees.[34]

Now the signs and degrees of the zodiac are of Babylonian origin. Let us consider the history of these ideas more closely.

XIII. THE SUN'S PATH IN ^{mul}APIN

The second tablet of the series ^{mul}APIN contains the following remarkable state-

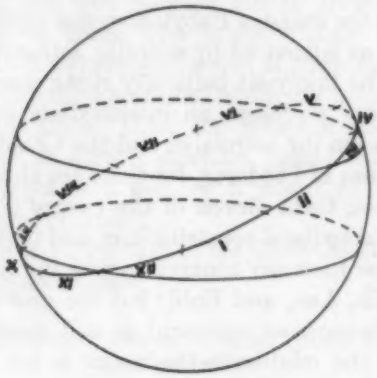


FIG. 5

ments (the Roman numerals stand for Babylonian months):

From XII 1 until II 30 the sun is in the path of those of Anu: wind and storm.

From III 1 until V 30 the sun is in the path of those of Enlil: harvest and heat.

From VI 1 until VIII 30 the sun is in the path of those of Anu: wind and storm.

From IX 1 until XI 30 the sun is in the path of those of Ea: cold.[35]

This text shows that the solar year was divided into twelve artificial months, during which the sun dwelt in different parts of the sky. Such a division of the year is usually called a "zodiacal scheme."

[34] See Gundel, *Dekane und Dekansternbilder*.

[35] See E. F. Weidner, *Archiv für Orientforschung* VII, 170, and J. Schaumberger, Ergänzungsheft 3 zu Kugler, *op. cit.*, p. 321.

The first question is: Did the Babylonians consider the motion of the sun simply as a north-south motion causing the four seasons, or did they know that the sun moves in an oblique circle?

They did know that the sun moves in an oblique circle, for the same text—after having enumerated eighteen constellations in "the moon's path," i.e., in the zodiacal belt[36]—states that not only the moon but also the sun and the other five classical planets walk along the same path. Thus the sun's course was conceived as an oblique circle through the zodiacal constellations, which was divided by the zones of Ea, Anu, and Enlil into four equal sections, so that the sun dwelt just three months in each section (see Fig. 5). According to this zodiacal scheme, the equinoxes and solstices must be in the middle of the months I, IV, VII, and X. Now, this is just what ^{mul}APIN asserts, once in the first tablet and twice in the second tablet. The strange combination of contradicting assertions, "on IV 15 *gag.si.sá* rises, 3 mana watch of the day, 3 mana watch of the night," which has puzzled so many scholars, is now easily explained. Sirius rises on the fifteenth day of the fourth month of the *stellar year*, which was defined as beginning with the rising of Aries (*ḫun.gá*). On the other hand, the spring equinox is in the middle of the first month of the *solar year*, defined by the zodiacal scheme of Figure 5. The scribe of ^{mul}APIN made the error of confounding as one these two wholly different schematical years. In reality, the rising of Sirius took place (700 B.C.) three weeks after the spring equinox.[37]

[36] The Greek technical term for "ecliptic" was "the line through the middle of the signs." The zodiac was conceived, in Greece as in Babylonia, as a belt some 12 degrees in width, in which the planets move.

[37] Schott's supposition that the scribe intentionally gave wrong dates in order to make his text appear very old seems improbable, to say the least.

XIV. THE TWELVE ZODIACAL SIGNS

In the zodiacal scheme of ^{mul}APIN, the year was divided into four astronomical seasons, corresponding to the four parts into which the ecliptic was divided by the zones of Enlil, Anu, and Ea. These four seasons were further divided into three artificial months each, but to these twelve months there were as yet no corresponding twelve parts of the ecliptic, or at least the text does not mention them. Thus, the zodiacal scheme was imperfect: the solar year was divided into twelve parts, but the zodiac only into four parts. In order to establish a perfect correspondence, the four parts of the zodiac had further to be divided into three parts each, of equal length, as indicated in Figure 5.

This division was actually effected some time afterward. It gave rise to the twelve *zodiacal signs*. The earliest text we know in which these signs occur is the observation text VAT 4924 from year 6 of Darius II (420 B.C.), published by Rehm.[38] It contains statements of the following kind:

Nisannu. Jupiter and Venus at the beginning of Gemini, Mars in Leo, Saturn in Pisces. 29th day: Mercury's evening setting in Taurus.

Addaru 2. Jupiter at the beginning of Cancer, Venus in Aries, Saturn, Mars, and Mercury invisible.

I agree with Schnabel, Weidner, and Rehm that these positions refer—just as in all later texts of the same kind—to zodiacal signs, not to zodiacal constellations. Still, the names of the signs were taken from the constellations they contain.[39] Thus, the sign Taurus may be denoted by *mul* (Pleiades), by *gu$_4$.an.na* (Taurus), or by *is li-e* (Hyades+Aldebaran), etc.

The Babylonian signs were of *strictly equal lengths*. This is clear from a table on page 519 of Kugler's *Sternkunde und Sterndienst in Babel* II, giving the co-ordinates of limiting points of Babylonian signs, computed from planetary texts of the period 210–60 B.C. The lunar tables, in which each sign contains just 30 degrees, confirm this conclusion.

In the light of such facts no credit can be given to Sextus Empiricus' assertion[40] that the Chaldeans defined the zodiacal signs so as to rise in equal times, measured by water clocks.

Because each month of the schematic year was supposed to consist of thirty days, the Babylonians divided each sign of the zodiac into 30 degrees, corresponding to these days. Thus, the whole circle was divided into 360 degrees. Mathematicians and astronomers all over the world adopted this Babylonian division.

According to the zodiacal scheme of ^{mul}APIN (Fig. 5), the equinoxes and solstices correspond to the middle points of the signs Aries, Cancer, Libra, and Capricorn. It is remarkable that Eudoxus, in his *Phaenomena*, on which Aratus' famous poem was based also located the vernal equinox at 15° Arietis, although this location was quite wrong for his own time (370 B.C.). With Eudoxus' limits of the signs, the correct location would be 6° Arietis. His location would be perfectly correct for 1000 B.C., as Böker has shown.[41] Did Eudoxus follow a Babylonian tradition? In any case, according to Böker, the geographical latitude assumed in the *Phaenomena* was exactly that of Babylon.

The later Babylonian lunar tables laid

[38] *Op. cit.*, p. 23; see n. 11 above.

[39] On the names of zodiacal signs, see Ungnad, *Archiv für Orientforschung*, XIV, 251.

[40] *Adv. math.* v. 23.

[41] R. Böker, "Die Sphäre Arats" (unpublished).

the equinoxes and solstices at 10 degrees and 8 degrees of the same signs [42] This shows that the limiting points of the signs were rigidly connected not with the equinoxes but with the fixed stars from which the signs took their names. The exact situation of the limiting points was determined, as I have already said, by Kugler.

XV. EMPEROR JULIAN'S "THREE WORLDS" AND THE ASTROLOGICAL DECANS

Hellenistic astrology is a curious mixture of Chaldean, Egyptian, and Hellenistic elements, extremely difficult to unravel. We do not know, for instance, how the Chaldean Decans of Diodorus came to be identified with the old Egyptian decans, nor why the zodiacal signs were divided into three parts each and each part assigned to one of the decans. We can guess that this metamorphosis was somehow connected with time-determination by means of rising signs and their paranatellonta,[43] for each decan was accompanied, according to our astrologers, by a swarm of simultaneously rising stars. However, we can show that there are more genuine Babylonian elements in this mixture than is usually supposed.

Our witness is Emperor Julian. He writes in his (Greek) *Oratio ad solem* (A.D. 362):

> The sun's disk, moving in a region without stars, is far above the fixed stars. *Thus it is not in the middle of the other six planets, but of the three worlds* (κόσμων), according to the mystical hypotheses, if it is at all right to call them hypotheses, and not dogmata, and the spherical ones hypotheses. For the dogmata are said to be revealed by Gods, or great Demons, whereas the hypotheses are only assumed as probable by their harmony with the phenomena. . . .
>
> Besides those mentioned already there are a great number of celestial Gods, known to those who contemplate the Heaven well and not like beasts. *For* [*Helios*], *intersecting fourfold the three* [*worlds*], *because the zodiacal circle communicates with each of them, divides it into twelve powers of Gods, and each of these again into three, so that thirty-six* [*powers of Gods*] *result.* Hence, I presume, the threefold gift of the Charities comes to us from heaven, from the circles; *for the God, by fourfold dividing them, sends us the grace of the seasons.*

I suppose that few have, as yet, fully understood these mysterious sentences. However, the zodiacal scheme of ^{mul}APIN provides us with the key to the mystery. The three κόσμοι are the paths of Enlil, Anu, and Ea. The sun's path, the zodiacal circle, communicates with each of them and is thus divided into four segments corresponding to the four seasons. Each of the four segments is divided into three zodiacal signs, which Julian calls "powers of gods."[44] Each of these is again divided into three segments, so that thirty-six decans result. Julian's statements are quite exact and refer to a consistent doctrine of seasons, zodiacal signs, and decans. He calls this doctrine "mystical hypotheses," which can only mean that these things were taught in the mysteries of Mithras, into which Julian was initiated. He considers this doctrine as revealed by gods, or great demons, and opposes it to the spherical hypotheses of Greek astronomy.

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[42] F. X. Kugler, *Die babylonische Mondrechnung* (Freiburg im Breisgau [1900]), pp. 77 and 99. The location at 8 degrees was followed by Greek and Roman authors (*ibid.*, p. 105).

[43] This method of determining time during the night is explained in Aratus' poem. In a paper to appear in the *Zeitschrift für Assyriologie*, the writer will show that this method is of Babylonian origin.

[44] As a matter of fact, the zodiacal signs were considered as mighty, divine powers in Babylonia, as we know from magical texts, in which their names were repeated a number of times (Ungnad, *loc. cit.*, p. 251).

THE CANAANITE GOD HORON

JOHN GRAY

In the inscribed figurines representing the enemies of the Pharaoh of the later Twelfth Dynasty which were published by Posener in 1940 occur three names compounded with *Ḥrn*, presumably Horon.[1] The first, E17, is the name of the chief of a place *Ṯ'pwm* not certainly identified and is read *ḥw'nwibwm*, "Horon is (my) father," which is also the name of the chief of *'wsj*, possibly Laish, E59. The third, E54, is *'mwḥ'*, "Horon(?) is uncle (or patron)," he being the chief of *'qtm* presumably *'arqa*, north of Tripoli. According to the general type of these names one might expect that *Ḥrn* is the name of a god.

When we look for fuller evidence of a god Horon in Syria and in Palestine, there seems at first sight little to support such a conjecture. The name is not common, but it does occur in the twin place-names Beth-Horon the Upper and the Lower, modern Beit 'ur el Fauqa and Beit 'ur et Taḥta in the pass leading from the upland plain north of Jerusalem to the Plain of Aijalon.[2] Any place-name compounded with Beth suggests, though it need not conclusively establish, a cult locality, e.g., Beth-Shemesh, Beth-'Anath, Beth-Dagon, Beth-El. So in the case of Beth-Horon we seem to have a possible point of contact with the divinity *Ḥrn* who appears apparently in Posener's texts, E17, E59, E54.

In the excavation of Ṣan el Ḥagar (Tanis, Avaris, and Pi-Ramesses) in the northeast of the Delta, Montet found a statue of Ramesses II represented, though king and adult, sucking his finger and squatting like a young child under the protection of a great falcon. On the four sides of the base runs an inscription which designates the king as "Whom Hauron loves." That the Hauron in question was a Semitic deity seems highly probable in view of the predilection of Ramesses for Syrian deities which is demonstrated by the appearance of 'Anat-'Antit[3] and Seth in the guise of Ba'al Ṣaphon of Ugarit[4] and Mikal of Beth-Shan.[5] The presence of 'Astarte too is attested by an inscription.[6] This extraordinary popularity of Syrian deities in Egypt may have been by way of commemoration of Ramesses' exploit against the Hittites at Qadesh in the same spirit as prompted the title "Africanus" in the case of Scipio. What has emerged, however, since Montet's discovery is that Horon was worshiped in Egypt before the Nineteenth Dynasty. Montet endeavors to demonstrate that the worship of Horon was introduced in the time of Haremhab, the founder of the Nineteenth Dynasty, and in fact he would read this name Horon-em-heb.[7] Certainly Haremhab does record his settlement of Semitic refugees in Egypt,[8] probably as a potential counterpoise to native opposition to his usurped authority; but there is no reason to suppose that, with them, he adopted a Semitic god Horon. In fact, Montet's reading and interpretation of the name

[1] G. Posener, *Princes et pays d'Asie et de la Nubie* ... (Brussels, 1940).

[2] Dussaud attests another such site near Tyre (*Topographie de la Syrie* [1927], p. 25).

[3] Montet, *La Revue biblique*, XLIV (1935), 154.

[4] Schaeffer, *Syria*, Vol. XII (1931), Pl. 6.

[5] Vincent, *RB* XXXVII (1928), 12–64.

[6] Montet, *RB*, XLIV (1935), 154; *Le Drame d'Avaris* (Paris, 1941), p. 142.

[7] Montet, *RB*, XLIV (1935), 155.

[8] Breasted, *Ancient Records of Egypt*, III, 10.

Haremheb have been questioned and contradicted. Seele has pertinently pointed out that Haremhab was a native of the town of Hatnesut, which was the center of the cult of the native god Horus.[9] It is therefore natural that in loyalty to his antecedents he should bear a theophoric name compounded with the name of his local god and meaning "Horus in festival."

In 1936 W. F. Albright published an article adducing further evidence on the subject of Horon from sources contemporary with or later than the Nineteenth Dynasty.[10] In a magical papyrus[11] from the late Nineteenth Dynasty, Horon is mentioned four times. In the first place his Semitic origin is suggested by his association with Reshef and ᶜAnat in the killing of a wolf. Twice again he is mentioned as "the valiant shepherd," these instances suggesting, as the previous one, his provenance from among the Semites whom the Egyptians knew immediately as shepherds. In the third place Horon is named with Horus as the protector of crops against wild beasts.[12] However we may regard this rather elusive deity, it is clear that he is at home in Syria-Palestine as is indicated by a seal from the eighth or seventh century B.C. with the inscription *ᶜebed Horon*[13] and by another inscription from the second century B.C. at Delos,[14] where Hauron or Horon probably appears as Auronas, being associated with Heracles and with him designated god of Jamnia in the Philistine Plain.

Here Virolleaud imagined that he had found a point of contact between the literature of Ras Shamra and Palestine. In the second tablet of the epic of Krt[15] he notes the imprecation of Krt upon his rebellious son, *yṯbr ḫrn ybn yṯbr ḫrn rᵓešk*, which he translates, "May Horon of Yibnah break, may Horon break thy head." Here Virolleaud takes *ybn* as the town of Yibnah in the Philistine Plain, though in Hebrew the name appears as Yabneh (Josh. 15:11) and Yabneel (II Chron. 26:4) and in Arabic with the equivalent of the final *h*, so that the word should have been written in Ugaritic with a final *t*. Virolleaud's equation Yibnah-*ybn* is only superficially impressive and with reference to Horon is no more than a curious coincidence. It is in the light of the Delos inscription and not on the strength of the Ras Shamra text that we should associate Horon with Yibnah-Jamnia. In the Ras Shamra text there is no doubt about the divinity of *ḫrn*, as we may see in the parallel *ᶜṯtrt šm bᶜl qdqdk*. If we contend for Virolleaud's reading *ybn*-Yibnah, then we are almost committed to the interpretation of *šm bᶜl* in the following line as a place-name as against the more natural reading, "*ᶜṯtrt*, the name (i.e., the hypostasis)[16] of Baᶜal." Actually *y* of the complex *ybn* is better taken as exclamatory, such as we find often used in Ugaritic as well as in Arabic, ancient and modern. The text in question, however, has its own value as proof of the belief in the god Horon in Syria in the Middle Bronze Age.

In the light of the evidence from Ras Shamra we see that the worship of Horon, though it received a new impulse in Egypt in the time of Ramesses II, was considerably more ancient than the Nineteenth Dynasty. Indeed, it has been demonstrated by Posener that it was not then

[9] Keith Seele, *Journal of Near Eastern Studies*, IV (1945), 239.

[10] Albright, *American Journal of Semitic Languages*, LIII (1936–37), 1–12.

[11] Papyrus Harris.

[12] Cf. *ngr mdrᶜ* in the Ras Shamra text 88, Virolleaud, *Syria*, XV (1933), 128 ff., ll. 68 ff.

[13] Albright, *AJSL*, LIII, 4–5.

[14] Virolleaud, *Revue des études sémitiques*, 1937, pp. 39 ff.

[15] II K, col. vi, 54–56.

[16] Cf. Samuel, *Šmwᵓabi* (*Aechtungstexte*), *šm bᶜl* (Phoenician inscript.), and *pnᵓbᶜl*, Phanebalos (on coins of Ascalon).

for the first time introduced into Egypt.[17] Already in the Eighteenth Dynasty in the coregency of Thutmose III and Amenhotep II (*ca.* 1448 B.C.), Horon is named on a papyrus[18] and again in certain foundation deposits from a temple in the proximity of the Great Sphinx at Gizeh.[19] These inscriptions on faience tiles belong to the reign of Amenhotep II (1448–1420).[20] Another instance of the mention of Horon in the Eighteenth Dynasty is a palimpsest inscription from Gizeh from the time of Tutankhamun (*ca.* 1360 B.C.).

The worship of Horon in Egypt is further attested in two papyri cited by Posener from the reign of Ramesses II and a stele in the Museum of Cairo presumably from the Saite Period (663–525 B.C.). Thus from at least the end of the nineteenth century down through the Middle and Late Bronze ages to the Hellenistic Period we find evidence for the worship of the god Horon. That he is a figure in the Semitic pantheon seems clearly proved by the fact that he is mentioned in parallel with *ʿṯtrt* in the Krt epic from Ras Shamra and as the divine element in the theophoric names of Amorite type in the Execratory Texts dealing with Syria-Palestine in the late Twelfth Dynasty and makes his final appearance in the Delos inscription as the god Auronas of Jamnia.

When we seek to determine the nature and attributes of the god Horon, we are on less certain ground. In the Execratory Texts there is little if anything to give us a clue. In the case of *ʿmwḫr*—if, indeed, Horon is indicated—the name seems to mean "Horon is Uncle (or Patron)." The type of name is common, *ʿmw* being predicated of other gods. Nor does the other theophoric compound of Horon carry us any further. *Ḥwꜣnwibwm* with full vocalic ending and mimation may mean "Horon is (my) Father." This may indicate merely that Horon was worshiped particularly by the bearer. On the other hand, it may indicate the high rank of Horon among the gods, just as El, the supreme god of the Ugaritic pantheon, is termed *ꜣab ꜣadm*, "the Father of men." Indeed, as falling presumably in the same period as the Execratory Texts, the relevant texts from Ras Shamra must be studied in close relationship with the early Egyptian texts. Here in the epic of Krt the king falls ill; his eldest son, on the specious plea that his father was no longer fit for war or the administration of justice, prepares to walk in the way of Absalom. The king, however, does recover and hurls an imprecation at the head of his presumptuous son: *yṯrb ḫrn ybn yṯbr ḫrn rꜥešk*. . . . Hence it would be quite natural for Krt to appeal to one who was "the Father" to vindicate his own paternal authority. This view might win support from the sculpture and inscription of Ramesses II from Tanis, where the paternal nature of the god might be assumed from the representation of the king as a young child, though in effect he was adult at his succession. If, however, Horon were "the Father" pre-eminently, corresponding to El *ꜣab ꜣadm* of the Ras Shamra texts, we should expect him to be better attested than he is. Moreover, the title "Father" in the Execratory Texts is no monopoly of Horon. Thus it seems that we must seek some other significance for Horon.

Albright cites the invocation of Horon among other gods on an Aramaic papyrus from Arslan Tash which has been dated to the seventh century.[21] With Horon are invoked "his wives . . . seven concubines . . . and eight wives of Baʿal." From this Albright has deduced that Horon was the

[17] Posener, *JNES*, IV (1945), 240–42; Albright, *BASOR*, No. 84, 1941, pp. 7–12.

[18] Papyrus Ermitage.

[19] Albright, *BASOR*, No. 84, 1941, pp. 7–10.

[20] Including his coregency with Thutmose III.

[21] Albright, *BASOR*, No. 84, p. 11.

peer of Baʿal. Furthermore, Horon is mentioned as being *tm py*, which Albright takes to mean "true of speech" (lit. "mouth"). The epithet "true of speech" in this text does not seem to connect with any other clue we have as to the nature and function of Horon, though it is noted by Gaster that the formula of invocation suggests that Horon had affinity with the Babylonian Nergal, the god of pestilence and the underworld.[22] Nergal's western counterpart, however, is Reshef,[23] who, as the Harris Papyrus shows, is quite distinct from Horon, though the two might be associated as in the text in question.

Another line of approach starts from the Egyptian magical texts in the Harris Papyrus where the Semitic god Horon is designated "the valiant shepherd" whose function is, moreover, to protect the crops against wild beasts. In passing, we may note that at the end of the Ras Shamra text concerning the birth of the gods Šhr and Šlm (SS) a figure is mentioned and invoked, *nġr mdrʿ*, "the protector of the crops." It may be that this figure and Horon are one, but, on the other hand, the portion of the text SS where *nġr mdrʿ* is mentioned is damaged beyond recovery, so that, pending further evidence, we must leave the identification with Horon in abeyance. Starting from the association of Horon with Horus in the Harris Papyrus, Albright argues that, since the latter was the enemy of Seth, who, in the Nineteenth Dynasty was assimilated to the Syrian Baʿal (Hadad), we should therefore regard Horon as the adversary of Baʿal.[24] He puts Horon in the category of Mot, perhaps the hypostasis of this deity who triumphs over Baʿal in the season of heat and drought. He seems scarcely consistent, however, when he equates Horon, "the valiant shepherd," with Adonis-Attis-Tammuz, who, he reminds us, were shepherds. This inconsistency simply serves to indicate the difficulty which attends any attempt to divine the nature and specific function of Horon, whom Albright, basing his conjecture on the doubtful etymology of the name, inclines to regard as a chthonic deity.

It is actually the Delos inscription which gives us a real starting-point. In this inscription dating from the second century B.C. we find Auronas associated with Heracles as a god worshiped by the people of Jamnia. If we identify Auronas with Horon, this association is significant. We know that from the Persian period onward there was considerable Phoenician penetration of the coastal plain of Palestine and even of the Shephelah, where we find a colony of Sidonians at Marissa from the middle of the third century B.C.[25] Where we find Sidonians, it is natural to expect their neighbors and keen rivals of Tyre, and we do in fact find that Ascalon is termed by the Greek geographer Scylax "a Tyrian city."[26] Thus it is quite conceivable that the seafarers who dedicated their offering to Auronas and Heracles, the gods of Jamnia, were Tyrian colonists of Jamnia, which had a seaward as well as a landward quarter.[27] Again, when we consider the subject of coinage in Palestine, we find that there does not seem to have been a mint at Jamnia. The question of one at the neighboring Ashdod, too, is very doubtful.[28] At Ascalon, on the other hand, which was settled by the Tyrians in the Persian period, coins were minted probably as early as the time of Alexander

[22] Gaster, *JNES*, VI (1947), 187.

[23] S. A. Cook, *Religion of Ancient Palestine in the Light of Archaeology* (1925), pp. 121 ff.

[24] Albright, *AJSL*, LIII (1936–37), 10 ff.

[25] Peters and Thiersch, *Painted Tombs at Marissa* (London: Palestine Exploration Fund, 1905), pp. 12 ff.

[26] Scylax 104, ed. C. Müller, *Geographi Graeci Minores*, I, 79.

[27] Schürer, *The Jewish People in the Time of Jesus Christ*, II, 78 ff.

[28] G. F. Hill, *Greek Coins of Palestine*, p. li.

the Great. Thus it is reasonable to suppose that Ascalon was the metropolis of the Tyrian settlement in the coastal plain of Palestine and that Jamnia was an offshoot of Ascalon, whose culture it reproduced. From coins of Tyre as well as from Greek historians[29] we know that the local Baʿal Melqart was Hellenized as Heracles. That Heracles was worshiped and peculiarly domiciled at Ascalon is clearly attested by an inscription from Canopus in Egypt, where a man of Ascalon dedicated an image of "the god of my homeland, the invincible Heracles, Baʿal." The date of this inscription is A.D. 228, but we have nonetheless a definite link with conditions in the coastal plain as indicated by the Delos inscription of the Jamnites. We should therefore expect that any information we have on the nature and function of the Tyrian Heracles might elucidate the problem of Horon-Auronas.

Baudissin, in his study on Adonis and Eshmun, adduced the example of two silver bowls found at Kition in Cyprus with a paneled representation of two figures fighting with wild beasts.[30] The design has certain Egyptian traits, but in the main characteristics it is undeniably Semitic. The older figure is bearded and clad in a lionskin, while the younger is obviously the helper of the former. The elder is quite obviously Heracles in Semitic guise, and the younger surely corresponds to Iolaos of Greek mythology. Now in Carthage, a Phoenician colony, Iolaos is found equated with Eshmun, who is in turn equated with Asclepius, the god of healing, in a trilingual inscription of the second century B.C. from Sardinia.[31] The same identification is suggested by the Syrian authorities, Philo of Byblos terming the eighth son of Suduk "Asclepius," and Damascius calling him "Eshmun." Thus Baudissin would identify the figures on the Kition bowls with Heracles-Baʿal Melqart and Iolaos-Eshmun. Thus, starting from the association of Auronas-Horon with Heracles of Jamnia, we are led to the suggestion that Auronas-Horon was the same as Eshmun. The name Eshmun appears to have come into use in Phoenicia comparatively late. It is not found in the Ras Shamra texts, in which it is possible that the same deity so prominent in later Phoenician religion may appear under another name.

The character of Eshmun as associate of Heracles and particularly as healer fits Horon well, in the opinion of the writer. The Harris Papyrus cited by Albright mentions Horon as a "valiant shepherd" and protector of the crops against wild beasts which might well correspond to the activity of Iolaos-Eshmun on the Kition bowls. That such a figure was known in Palestine is attested by the neo-Platonist Marinus, who refers to "Leontouchos Asklepios" as a divinity of Ascalon,[32] probably the metropolis of Jamnia,which is only some fifteen miles distant.

In the Old Testament the writer believes that it is possible to find faint traces of the worship of Horon in the character of a healing god called by the Phoenicians Eshmun. First of all, there is Beth-Horon, possibly the shrine of this deity in the vicinity of Jerusalem. Certainly neither the name of the place nor anything we know of it gives us any clue to the character of Horon. In the immediate vicinity, however, some five miles to the east, there is a place Rafat which has been identified by Abel[33] with Yirpeel of Josh. 28:27, which was in the country of Benjamin.

[29] E.g., Arrian II, xiv, 4.

[30] Baudissin, *Adonis and Eshmun* (Leipzig, 1911), pp. 296 ff.

[31] G. A. Cooke, *North Semitic Inscriptions* (1903), No. 40, p. 109.

[32] Marinus *Life of Proclus* xix; ed. Cobet, Westermann, and Soissonade (Paris, 1878).

[33] Abel, *Geographie* . . . , II, 92.

The significance of a place named "God heals" in the vicinity of a shrine of Horon, who, on other grounds, has been identified with Eshmun, is obvious. Again, in Jerusalem, ten miles distant from Beth-Horon, we find the brazen serpent in use as a cult object as late as the time of Hezekiah.[34] That this object was definitely associated with healing is quite clear from the obviously aetiological account of its institution by Moses.[35] That the serpent cult was familiar at Jerusalem is further suggested by the evident significance of "the stone of Zoheleth," the Serpent Stone. The sanctity of this place which stood in proximity to the Well of Rogel is indicated by the fact that it was the scene of the sacrifice of Adonijah on the occasion of his short-lived elevation to the monarchy.[36] Robertson Smith has further emphasized the connection in the tradition and belief of the southern Arabs that medicinal springs are inhabited by jann in the form of serpents.[37] Now the Greek counterpart of Eshmun the healer, Asclepius, was represented with two serpents coiled round a staff.[38] Are we, then, to see in the brazen serpent, Nehushtan, and in Zoheleth at Jerusalem, traces of the cult of Horon-Eshmun?

There are certain facts which seem to suggest a healing cult in Jerusalem and the vicinity. There is first the place-name "the Plain of the Rephaim." The derivation of this word from the root *rp'*, "to heal," is supported by evidence from Ras Shamra.[39] Philo of Byblos[40] records the Phoenician tradition that Asclepius was the eighth son of Suduk, which is surely the Semitic צדק. The association of Suduk with healing seems indicated by the Phoenician tradition that he was one of the discoverers of the properties of salt.[41] We recollect that Zedeq was a constituent part of the name of Adonizedeq, the native king of Jerusalem at the time of the Hebrew invasion,[42] and the first reference in the Old Testament to any cult at Jerusalem was to that of a deity whose priest was Melchizedeq.[43] Again, the dedication of David's altar on the threshing-floor of Araunah the Jebusite is of great significance. The threshing-floor in the Semitic world is the frequent scene of ritual practices[44] and, on this occasion, was regarded by Hebrew tradition as the scene of a theophany. The tradition which assigns the threshing-floor to Araunah the Jebusite may be a clumsy attempt to conceal the fact that the spot had been hallowed by the worship of a pre-Israelite deity. The ancient sanctity of the place as indicated by the cup-marks on the rock, es Sakhra, is generally admitted. The circumstances of David's foundation are suggestive in this context, the theophany being apropos of the staying of a general plague. Certainly the name Araunah, variously spelled in Hebrew,[45] does not

[34] II Kings 18:4–6.

[35] Num. 21:8–9.

[36] I Kings 1:9.

[37] W. R. Smith, *Religion of the Semites* (1894), p. 168.

[38] Baudissin, *op. cit.*, pp. 329 ff.

[39] Three fragments, Rp. I, II, III, edited by Virolleaud, *Syria*, Vol. XXII (1941).

[40] C. Müller, *Fragmenta historicorum Graecorum* III, 567, § 20; cf. Damascius (Migne), Photius 352 *b*, where the eighth son of Suduk is given as Eshmun.

[41] Philo, *op. cit.*, p. 567, § 4.

[42] Josh. 10:1, 3.

[43] Gen. 14:18 ff. So too, Zadoq, the name of the high priest, is taken as a hypocoristicon by Mowinckel, *Ezra den Skriftlaerde*, 1916. Mowinckel emphasizes the fact that Zadoq comes into prominence only after David's capture of Jerusalem, hence his status and the cult with which he was associated were independent of the religious tradition of Israel. H. H. Rowley associates Zadoq with the pre-Israelite cult localized at Jerusalem, probably at the Stone of Zoheleth (*Journal of Biblical Literature*, LVIII [1939], 123).

[44] A. J. Wensinck, *Some Semitic Rites of Mourning and Religion* (Amsterdam, 1917), pp. 1–11. Note also the threshing-floor as the objective of a ceremonial visit of the *rp'm* in the Ras Shamra texts Rp I, col. 2, 11, col. 3, 4.

[45] II Sam. 24:16, 20, 21, 22, 23, 24 ארונה; 18 ארניה; I Chron. 21:15 ff. ארנן.

phonetically reproduce Horon, though it does suggest the name. In view, however, of the cosmopolitan character of pre-Israelite Jerusalem, the name might be a local variant of Horon; the healing god, or a wilful corruption of the name on the part of the Hebrew invaders.[46] We thus seem to have certain clues to the cult of a healing god in Jerusalem and its vicinity dating from pre-Israelite times. It is possible to find certain affinities with Eshmun of later Phoenician records, who in turn may be identified with an earlier figure Horon who retained his name in Palestine as Auronas of Jamnia.

When we turn again to the passage in the Krt epic of Ras Shamra where the king invokes the wrath of Horon upon his son, it is surely fitting that on his recovery from what his son had considered a mortal illness Krt should invoke the healing god who had restored him.

Moreover, in the same passage immediately after the curse *yṯbr ḥrn . . . . rʾešk* the king continues in parallel *ʿṯtrt šm bʿl qdqdk*, "May *ʿṯtrt*, the hypostasis (lit. name) of Baʿal (break) thy crown." We have thus to take *ʿṯtrt* as parallel to *ḥrn*. Now, though we do find the theophoric name Ishtar-miti-balliṭ[47] in Assyrian times, there is neither here nor in the Ras Shamra texts any specific association of Ishtar-*ʿṯtrt* with recovery from sickness as was the case with Eshmun whom we identify with Horon. From the Phoenician milieu, however, we find *ʿṯtrt* associated with Eshmun, as she is here associated with Horon. Baudissin attests a coin of Sidon from the time of either Alexander Severus or Caracalla, where a certain chariot which is the regular symbol of ʿAstarte appears together with the figure of Asclepius.[48] To be considered along with this evidence is the name Eshmun-ʿAstarte from Carthage.[49] This last inscription, unfortunately, is not dated, but the association of Eshmun and ʿAstarte is highly significant in view of the association of the goddess and Horon in the Krt legend and affords us one more clue to the identification of Horon and Eshmun. We have already seen that Auronas and Asclepius were worshiped at Ascalon and the other Philistine site of Jamnia in association with Heracles, the supreme god of the Tyrians. Apropos of the association of Horon with *ʿṯtrt šm bʿl* in the curse of Krt and the combination Eshmun-ʿAstarte in the proper name from Carthage there is further evidence from Ascalon. Hill in his study of the coins of Palestine declares that the city-goddess who appears on the coins of Ascalon is certainly ʿAstarte.[50] Besides this figure there appears throughout the Roman Imperial Period another, ostensibly male, which in the time of Hadrian and Antoninus Pius is named Phanebalos,[51] which obviously corresponds to *pnʿ baʿal*, the face, manifestation, or hypostasis, of Baʿal. This expression corresponds to the title *šm bʿl* by which *ʿṯtrt* is designated in the Krt text.

In the Delos inscription the votaries of Auronas and Heracles of Jamnia undertake to sacrifice to these gods anything except a goat. Albright takes the goat to be sacred to Dionysus, deducing this from the Greek epithet Eripheios which is applied to Dionysus.[52] He admits, however, that the prohibition against the sacrifice of goat flesh is unknown except from this inscription and another at Delos, where the deities in question are Zeus Ourios,

[46] Cf. Montgomery, *JAOS* LV (1935), 94, who suggests that Araunah may be a local form of the Hurrian title *ʾwr*, "King."

[47] Baudissin, *op. cit.*, pp. 311 ff., meaning "Ishtar, make the dead to live."

[48] *Ibid.*, p. 220.

[49] *Ibid.*, p. 222.

[50] *Op. cit.*, p. liv.

[51] *Ibid.*, pp. lxi ff.

[52] Albright, *AJSL*, LIII (1936–37), 5.

the Palestinian ᶜAstarte, and Aphrodite Ourania.[53] The goat taboo, then, is not confined to the cult of Dionysus, so that our position is not infringed. Indeed, even if we were to associate Auronas of Jamnia with Dionysus, our identification with Eshmun-Asclepius would not be precluded. Dionysus is well attested on coins of Sidon rather than of Tyre and is particularly common on coins of Rafia. Philo of Byblos, on the other hand, makes no mention of Dionysus, by which we may reasonably assume that the Dionysus who appears on Phoenician coins had had his identity merged with some other divinity. That Asclepius-Eshmun was this divinity seems to be indicated by Damascius, who applies to Eshmun-Asclepius the epithet *Paian* which we find applied also to Dionysus in Greek literature. On a coin of Sidon, too, from the time of Elagabalus we find the figures of Apollo and Dionysus with the chariot of ᵒAstarte which we have already found on a coin with Asclepius. That Dionysus, the god of wine and rejuvenation, had much in common with Asclepius-Eshmun-Horon, the god of healing, seems clearly indicated by the titles *Lysios*, *Lyaios*, *Alexikakos*, and particularly *Akesios* which are freely applied to him. Thus the suggestion that the goat taboo on the Delos inscription indicates the identification of Auronas with Dionysus, far from destroying our case for the equation of Auronas-Horon with Eshmun-Asclepius, is actually indirect confirmation of the thesis.

UNIVERSITY OF MANCHESTER

[53] Cited in full by Macalister, *The Philistines* (1914), p. 94.

ZUR LESUNG VON "REGIERUNGSJAHR"

ELMAR EDEL

SEIT Sethe in seiner Arbeit über "Die Entwicklung der Jahresdatierung bei den alten Ägyptern"[1] für die Gruppe oder die Lesung *ḥ³.t sp* "Beginn des (so undsovielten) Males (der Viehzählung)" aufgestellt hat, ist diese Lesung zum anerkannten Gemeingut wohl aller Ägyptologen geworden. So hat sich erst jüngst wieder[2] der englische Ägyptologe A. H. Gardiner zu Sethes Auffassung mit folgenden Worten bekannt: "Sethe's brilliant essay proved that the hieroglyphic group or ... did not represent the common word for year *rnpt*, Coptic ⲢⲞⲘⲠⲈ, as had previously been supposed, but was to be read *ḥ3t-zp*, literally *Front* ( ) *of the occasion* (). ..."

In der Tat, die Richtigkeit der e i n e n Komponente der Setheschen Lesung, nämlich *sp* für ◎ oder ○, steht ausser Zweifel und eben in diesem Nachweis, dass das Zeichen ○ nicht etwa ein in der Lesung zu vernachlässigendes Determinativ für "Jahr," sondern das Ideogramm für *sp* "Mal" sei, liegt das bleibende Verdienst Sethes.[3] Von diesem Nachweis aber hat man scharf zu trennen eine Kombination Sethes, wonach die vor diesem Wort *sp* "Mal" stehende Gruppe , oder [4] *ḥ³.t* "Beginn, Anfang" zu lesen sei. Meine Einwände richten sich auch lediglich gegen diesen Teil von Sethes Lesung, wobei ich darauf hinweisen darf, dass Sethe selbst nicht restlos von seiner Kombination überzeugt war; auf S. 99 der oben zitierten Untersuchung sagt er: "Als Bezeichnung für das "Jahr" s c h e i n t[5] man das Wort *ḥ³-t* "Anfang" gebraucht zu haben, das man indess stets nur durch das Ideogramm in der Schrift bezeichnete."

Die beiden Lesungen für die Gruppe , alt *rnp.t* und seit Sethe *ḥ³.t sp*, drängen nun geradezu danach sich in der Synthesis *rnp.t sp* miteinander zu versöhnen. In der Tat ist diese Lösung, die aus jeder der beiden vorhergegangenen Lesungen die in ihnen enthaltenen richtigen Elemente übernimmt, so schlicht und unkompliziert, dass die Schwere der Beweislast auf dem liegt, der weiterhin für eine der alten Lesungen eintreten wollte. Es liegt daher in der Natur der Sache, dass meine Aufgabe zunächst nur negativ zu sein braucht; wenn die Unhaltbarkeit von Sethes Lesung *ḥ³.t sp* vom bedeutungsgeschichtlichen und schriftgeschichtlichen Standpunkt aus einmal klar erfasst ist, so ergeben sich die positiven Folgerungen sozusagen von selbst.

Was die bedeutungsgeschichtliche Seite des Problems angeht, so sind Sethes Bemühungen zu erklären, weshalb man ein Jahr nicht nach dem Ereignis selbst, sondern nach dem "Anfang" dieses Ereignisses benannt haben soll, als völlig unbefriedigend zu bezeichnen. Er nimmt an (S. 97), "dass man ursprünglich die Jahre nur nach solchen Ereignissen zu benennen pflegte, deren Anfang mit dem

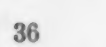
[1] *Untersuchungen*, Bd. III (Leipzig, 1905).

[2] *JEA*, XXXI (1945), S. 14.

[3] Auch H. Brugsch war es übrigens schon bekannt, das in den -Datierungen für das Zeichen ○ gelegentlich ◎ *sp* "Mal" geschrieben wird, vgl. Brugsch, *Ägyptologie*, S. 349.

[4] Math. Pap. Rhind, Titel; *ÄZ*, XXXV, 17, Z. 7 (=Beispiel 28 bei Sethe, *Unters.*, III, 90).

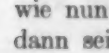
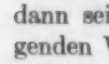
[5] Von mir gesperrt.

Anfang des betreffenden Jahres zusammenfiel." Das trifft, wie Sethe anschliessend bemerkt, allerdings nur für das "Jahr der Vereinigung der beiden Länder" zu, und auch in diesem für Sethes Theorie günstigsten Fall ist es absolut unverständlich, warum man "Anfang der Vereinigung" gesagt haben soll anstatt  *=rnp.t sm³ ḥ.wj* "Jahr der Vereinigung," wie nun einmal dasteht. Sethe schliesst dann seinen Erklärungsversuch mit folgenden Worten ab (S. 97: "In den zahlreichen Fällen, wo ein Jahr nach einem der regelmässig wiederkehrenden Feste [wie "Geburt des und des Gottes"] benannt war, würde eine solche Erklärung wohl aber nur möglich sein, wenn man eine starke Verschiebung zwischen 2 Jahren (etwa einem Mondjahr und dem ägyptischen Kalenderjahr von 365 Tagen) annehmen wollte." Wie unglaubwürdig freilich eine solche Annahme auch Sethe gewesen sein muss, geht wohl zur Genüge schon aus seiner eigenen Formulierung hervor.

Die schriftgeschichtliche Seite unseres Problems lässt sich am klarsten durch folgende Gegenüberstellung erfassen: Schreibung für Regierungsjahr:

1. Mit ⊙ sp
   - *a*)
   - *b*)
   - *c*)

2. Ohne ⊙ *sp*
   - *a*)
   - *b*)
   - *c*) ———

3. Schreibung für das Thronbesteigungsjahr:
   - *a*) 
   - *b*) 
   - *c*) ———

1*a* ist die im AR übliche Schreibung; 1*b* taucht erstmalig zu Ende der VI. Dyn. auf (*Urk.* I, 277, 9; 304, 2) und ist von da an die übliche Schreibung; 1*c* kenne ich nur aus Math. Pap. Rhind (Titel) und aus Beispiel 28, S. 90, der Setheschen Arbeit.

Die Schreibungen 2*a*, *b* kommen erst seit dem MR vor (Sethe, S. 88 Beisp. 1, 2, 4, 5; 3 ist zu berichtigen nach *ÄZ*, XLII, 136). Die Weglassung des *sp* in der Sprache ist dadurch zu erklären, dass seit Ende des AR die Vermögenszählung alljährlich erfolgte; das "Jahr des x. Males" war somit identisch mit dem "x. Jahr" ("Jahr x").

3*a* ist belegt in *Urk.* I, 10, 14; 307, 9; 3*b* in S. Hassan *Exc. Giza* 1930/31, S. 190 (V. Dyn.). Sethe liest auch hier *ḥ³.t sm³ ḥ.wj*![6]

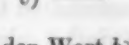
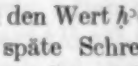
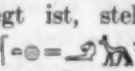
In der Reihe , , , die sich aus den Rubriken *a*–*c* ergibt, spiegelt sich ein Stück Schriftgeschichte wieder; die Weglassung der Femininendung *t* bei *a*) weist auf die älteste Stufe der hieroglyphischen Orthographie hin. Dass die Zeichenverbindung , , *rnp.t* zu lesen ist, kann für den unvoreingenommenen Betrachter keinem Zweifel unterliegen; es ist eben der Wert, der dieser Gruppe auch in jedem beliebigen anderen Kontext zuerkannt wird. Es ist vielleicht nicht überflüssig, darauf hinzuweisen, dass alle diese Datierungen nur Sonderfälle der seit der Thinitenzeit üblichen Benennung der Jahre nach einem charakteristischen Ereignis sind (Sethe a.a.O., 65); bei 1 besteht das Ereignis in dem soundsovielten "Male" der Steuerzählung und bei 3 in der "Vereinigung der beiden Länder." Ein besonders schönes Beispiel einer ausführlichen Datierung ist uns aus der XI. Dyn. erhalten: . . . . "Jahr des 14. Males . . . Jahr des Aufstandes von Thinis" Brit. Mus. 99 (1203), Z. 13. Wer möchte hier im Ernst die Lesung *ḥ³.t sp* 14 . . . *ḥ³.t n.t śbj Ṯnj* gegenüber *rnp.t sp* 14 . . . *rnp.t n.t. śbj Ṯnj* verteidigen? Und wer

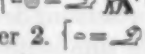
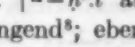
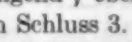
[6] A.a.O., S. 99 unten.

vermag wirklich zu glauben, dass x. "Anfang nach dem x. Mal" heissen soll?

Um nun auf die Gründe einzugehen, die Sethe zu der Lesung *ḥ³.t sp* veranlasst haben, seien noch die Schreibungen der Edfutexte für "Regierungsjahr" angegeben (Belege bei Sethe, a.a.O. S. 94):

1. Mit	2. Ohne
d)	*d*)
e)	*e*) ——

Da in den Edfutexten den Wert *ḥ³*(*.t*) besitzt und *s³b* als späte Schreibung für *sp* "Mal" belegt ist, stellte Sethe die Gleichung 1.  auf, aus der er weiter 2.  folgert. Der Schluss 3. aber ist schon nicht mehr zwingend[8]; ebenso gut könnte man aus 2. den Schluss 3.  ziehen. Bei dem willkürlichen und gesuchten Schriftsystem der Spätzeit ist dieser Schluss weit mehr berechtigt als der andere, der wegen seiner unhaltbaren Folgerungen nicht annehmbar sein kann.

Doch ist schon der Schluss 1 nicht völlig sicher! Nach einer schon von Brugsch in diesem Zusammenhang herangezogenen Notiz aus Horapollo sollen die Ägypter ein Wort für "Jahr" besessen haben, das zugleich auch das "Viertel" bedeutete: *βουλόμενοί δε ἔτος εἰπεῖν, τέταρτον λέγουσιν* (Horapollo, I, 5).[9] Diese Bezeichnung des Jahres soll nach Horapollo daher kommen, dass das "Gottesjahr" von 365¼ Tagen, also das Sothisjahr, den vierten Teil einer Periode von 4·365¼ = 1461 Tagen (*τετραετηρίς*) bildet, während der der Siriusfrühaufgang auf denselben Tag fällt. Brugsch und Sethe kombinieren nun sehr ansprechend das aus den Edfutexten bezeugte *ḥ³-s³b*, das sie *ḥ³-sp* lesen, mit einem ägyptischen Ausdruck für "Viertel," *ḥsb*, zu dessen Existenz die Arbeit Sethes über "Zahlen und Zahlworte bei den alten Ägyptern" (1916), S. 75 ff. zu vergleichen ist. Sethe glaubt, dass *ḥ³-sp* "Anfang des Mals" in später Zeit nicht mehr verstanden worden sei und Anlass zu einer gelehrten Etymologie gegeben habe, die den Ausdruck als *ḥsb* "Viertel" deutete.[10] Weit befriedigender aber wäre die andere Möglichkeit, die Sethe gar nicht in Betracht gezogen hat, dass nämlich die an sich sehr sinnvolle Bezeichnung des Jahres von 365¼ Tagen als "Viertel" (der Tetraeteris von 1461 Tagen)[11] das Primäre ist, und dass die Schreibungen  *ḥ³-s³b* und (spielerisch als "Vorderteil des Schakals" aufgefasst und somit ebenfalls = *ḥ³-s³b* nach Sethe S. 97) einfach die änigmatische Wiedergabe von *ḥsb* "¼" sind. Gleichung 1 wäre dann nur eine Gleichung der Bedeutung, aber nicht der phonetischen Lesung der beiden Grössen  *rnp.t sp* und  (*ḥ³-s³b* für) *ḥsb*. Wenn man sich klar macht, dass diese *ḥsb*-Schreibungen in den Edfutexten erst n a c h Einführung des kanopischen Jahres zu 365¼ Tagen unter Ptolemaios III. Euergetes (237 v. Chr.) belegt sind, so erscheint diese Deutungsmöglichkeit gar nicht so unwahrscheinlich. Wie man sich immer diese spielerischen Schreibungen der Edfutexte erklären mag, eines

[7] Bereits von Brugsch, *Thesaurus*, S. 251 *ḥā-sop* gelesen und "Anfang eines *sop*" gedeutet.

[8] Dieser Schluss wurde von Brugsch auch nicht gezogen, obwohl er bereits in mit = *sp* in kombinierte: *Thes.*, S. 251; *Ägyptologie*, S. 349.

[9] Vgl. dazu Sethe a.a.O., 97/8 und seinen Zusatz in "Zahlen und Zahlworte" (1916), S. 75, Anm. 9. Auf den Kommentar zu dieser Stelle bei Francesco Sbordone, *Hori Apollinis Hieroglyphica*, S. 10/11 macht mich Dr. Hintze freundlichst aufmerksam.

[10] A.a.O., S. 99.

[11] Die man ihrerseits nach Hor. II, 89 dann folgerichtig als "Jahr" bezeichnet haben soll, vgl. Sethe a.a.O., 98.

ist sicher: Die Lesung *rnp.t sp* für 𓇋𓊪 vermögen sie nicht zu erschüttern.

Gegen Sethes Lesung *ḫ³t-sp* spricht auch der Befund im Koptischen. Bekanntlich erblickte Sethe in Boh. ⲁⲥϥ-ⲟⲩⲓ "Regierungsjahr 1"[12] einen Beweis für die Richtigkeit seiner Kombinationen; die lautlichen Gründe, die Sethe dafür a.a.O. S. 95 herbeibringt, sind auch durchweg überzeugend bis auf die angebliche Vertretung des ⲏ von ϩⲏ "Vorderseite" durch ein ⲁ in unbetonter Silbe. Ich muss gestehen, dass ich eine solche Vertretung für äusserst unwahrscheinlich halte; so viel ich sehen kann, tritt unbetontes ⲁ nur da auf, wo haupttonig ⲟ oder ⲱ stehen würde.[13] Auch ist die nach Sethe zu erwartende entsprechende Form *ϩⲁⲥⲡ-[14] im Sah. niemals aufgetaucht, dafür jedoch eine ganze Reihe von Belegen, die als sah. und fay. Form ⲥⲡ-, ⲥⲉⲡ- erweisen (Crum, *Coptic Dict.*, 349*a*). In den meisten Fällen hat dabei ⲥⲉⲡ- den weiblichen Artikel (ⲧⲥⲉⲡ-ⲟⲩⲉⲓ = ⲁⲥϥ-ⲟⲩⲓ), sodass Sethe seiner einmal gefassten Meinung zuliebe auf den ganz unmöglichen Ausweg verfallen ist, in dem ⲧ die alte Femininendung von *ḫ³.t* sehen zu wollen.[15] Die Erhaltung einer Femininendung vor Konsonant ist jedoch nur bei ϩ bezeugt, wie in ϩⲗⲟⲱⲣ und Νεφθυς. Vor anderen Konsonanten fällt sie weg, vgl. Ασφυνις für *Ḥ.t Snfrw* oder *Ḥi-ku-up-ta-aḫ* (*EA* 84, 37) für *Ḥ.t-k³-ptḥ*, was den Wegfall des *t* bereits für das Neue Reich beweist. In ⲥⲉⲡ-: boh. ⲁⲥϥ- liegt also nur die Fortsetzung des alten *sp* "Mal" vor, wobei sich zum lautlichen Verhältnis der beiden Dialektformen eine Parallele in ϫⲡ-: boh. ⲗϫⲡ- "Stunde" nachweisen lässt.[16]

Bei der gewöhnlichen Art der koptischen Datierung gebraucht man jedoch das Wort ⲣⲟⲙⲡⲉ "Jahr" mit bestimmtem Artikel und weiblichem Ordinalzahlwort. Dieser allen koptischen Dialekten gemeinsame Gebrauch würde eine ganz junge Erscheinung und ohne jede Vorstufe im Ägyptischen sein, wenn Sethes Lesung 𓇋𓊪 = *ḫ³.t* zu Recht bestünde. Die Lesung von 𓇋𓊪 als *rnp.t* bietet nun die befriedigendere Möglichkeit, die letztgenannte koptische Datierungsart auf ein alt bezeugtes ägyptisches Prototyp

[12] Dan. 1:21.

[13] Bekannte Fälle dieser Art liegen in den Zusammensetzungen mit Ⲁϥ-, der tonlosen Form von ϩⲱⲣ "Horus" vor; weitere Beispiele sind B. ⲣⲁⲙⲁⲟ, ⲁⲛⲁⲙⲏⲓ, in denen die tonlosen Formen von ⲣⲱⲙⲓ, ⲱⲛⲓ enthalten sind, vgl. Ranke, *Keilschriftl. Material* (1910), S. 75. ⲏ erscheint in enttonter Form als ⲉ, wie die Verbindungen ⲛⲉⲃ-ϩϩⲓ, ⲛⲉⲃ-ⲏⲓ u.a.m. (Crum, *Copt. Dict.*, 221 *b*) zeigen, die als ersten Bestandteil den Status constructus von ⲛⲏⲃ "Herr" aufweisen; die Verbindungen B. ϕⲏ ⲉⲧ- und ⲛⲏ ⲉⲧ- "der, welcher," "die, welche" werden im S. zu ⲡⲉⲧ-, ⲛⲉⲧ- und nicht etwa zu *ⲡⲁ ⲉⲧ-, *ⲛⲁ ⲉⲧ- verkürzt. Auch ϣⲏⲣⲉ fem. ϣⲉⲉⲣⲉ hat in den tonlosen Formen nie ein ⲁ, sondern ⲉ, vgl. Crum, *Copt. Dict.*, 584 *a*; 585 *a*, *b*, und die mit *p³- ỉrj-n-* zusammengesetzten Personennamen (Preisigke, *Namenbuch*, 483 *a* ff.). Die assyrische Umschreibung *Pi-ša-an-ḫu-ru* (Assurb. I, 92) widerspricht dem nur scheinbar; sie ist von dem Namen *p³-ỉrj-n-ḥr* Ψενρυς (Ranke, *PN*, I, 119, 3) zu trennen (gegen Ranke, *Keilschr. Mat.*, S. 32 und Steindorff, *Beiträge zur Assyriologie*, I, 347) und mit Brugsch, *ÄZ*, X (1872) S. 29, einem *p³-ỉn-ḥr* "Der Bruder des Horus" gleichzusetzen. Zu diesen Namen mit dem Element *p³-ỉn-(n-)* +Gottesname gehören die Umschreibungen Ψαν- +Gottesname (Preisigke, *Namenbuch*, 481, 482). Vgl. Ψαν-μουτ mit *ỉn-n-mw.t* (*PN*, I, 309, 3) und Pišanḫuru mit *p³-n-ỉn-ḥr* "Der des *Ŝn-ḥr*" (*PN*, I, 110, 28) und *t³-ỉn.t-nt-ḥr* (*PN*, I, 367–17).

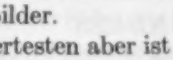
[14] Von Sethe nicht ausdrücklich so rekonstruiert; am Ende von S. 95 bemerkt Sethe jedoch, dass das anlautende *ḫ* im Boh. weggefallen sei, im Sah. aber nach dem Muster von ϩⲁⲧⲣⲉ: ⲗⲟⲣⲉ "Zwilling," ϩⲗⲟⲱⲣ: ⲗⲟⲱⲣ äg. *Ḥt-ḥr* usw. als ϩ zu erwarten sei.

[15] Bei Spiegelberg, "Eine angebliche Indiktionsbezeichnung im Koptischen," *ÄZ*, LI, 138. Bezeichnend ist, dass auch Crum, der zuerst ⲧ- als fem. Artikel auffasste (*Copt. Dict.*, 349 *a*), schliesslich Sethes Suggestion erlegen ist (s. Add. S. XXI *b*; Hinweis von Dr. Hintze); ein weiteres dort nachgetragenes Beispiel ⲥⲡ-ϥⲧⲟ weist den angeblichen Rest von (*ḫ³*).*t* nicht auf. Wem trotzdem an dieser Auffassung des fakultativen ⲧ- vor ⲥⲉⲡ- sehr viel gelegen sein sollte, hat im übrigen auch die Möglichkeit es mit der Femininendung von *rnp.t* zu identifizieren.

[16] Zu anderen Fällen von prothetischem ⲁ- im Bo. vgl. man Crum, *Copt. Dict.*, 1 *a*. Nach Crum ist übrigens auch ⲥⲉⲡ- in der Bedeutung "Stunde" belegt (*Copt. Dict.*, 349 *a*).

zurückzuführen; die unter 2 genannten Varianten mit blossem *rnp.t* anstatt *rnp.t sp* wären dann die unmittelbaren altägyptischen Vorbilder.

Am Bemerkenswertesten aber ist wohl, dass sich im Fay. sogar noch die Verbindung von *sp* und *rnp.t* findet: ⲦⲤⲈⲠ ⲘⲎⲦⲒ ⲚⲀⲀⲘ[ⲠⲒ] "Das zehnte Mal von Jahr" und ⲀⲀⲘⲠ[Ⲓ] ⲦⲤⲈⲠ Ⲑ̅ "Jahr des neunten Males" (Crum. *Copt. Dict.*, 349 *a*).

Die Verbindung *rnp.t sp* ist demnach bis ins Koptische hinein lebendig geblieben, wenn sie auch meist zu *rnp.t* oder seltener zu *sp* verkürzt wird. Im Einzelnen bleibt noch einiges unklar (so die Gründe für den Genuswechsel des alten *sp*, den Gebrauch des Artikels und der Ordinalia bei *rnp.t* im Gegensatz zu *sp*), doch an der Lesung und Deutung von  als *rnp.t* (*m-ḥt*) *sp x* "Jahr nach dem x-ten Male" bezw. "Jahr des x-ten Males" kann kein Zweifel mehr möglich sein.[17]

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[17] Wir haben folgende Entwicklungsreihe: "Jahr des x. Males der Zählung der Rinder (usw.) von Ober- und Unterägypten" (*Urk.*, I, 112, 15), "Jahr des x. Males der Zählung der Rinder" (*Urk.*, I, 242, 7), "Jahr des x. Males der Zählung" (*Urk.*, I, 236, 17), "Jahr des x. Males" (die weitaus überwiegende Ausdrucksweise) und schliesslich die genannten koptischen Ausdrücke.

THE NAME *POIMANDRĒS*

RALPH MARCUS

THE origin and meaning of the name *Poimandrēs*, the title of the first treatise of the *Corpus Hermeticum*, have been subjects of speculation from the time when the Corpus first took shape, probably in the second or third century A.D. Since the Hermetic writings, in whatever language most of them were originally composed, circulated chiefly among Greek readers, it is natural that the name *Poimandrēs* was at an early period connected with ποιμὴν ἀνδρῶν, "shepherd of men." This connection was probably strengthened by the resemblance which early readers, like some recent scholars (see below), seemed to find between parts of the Hermetic Corpus and the *Shepherd of Hermas*. So, for example, the author of Treatise XIII, which Puech thinks may contain reminiscences of the Gospels,[1] represents the speaker as saying to God, "Nous pastures (ποιμαίνει) thy Logos."[2] This etymology continues to appear in the commentaries of some of the Neo-Platonists of the Renaissance and of seventeenth- and eighteenth-century scholars.[3] At the same time there were early modern scholars, like Fabricius, for instance, who called attention to the existence of the name Ποίμανδρος in Greek literature, used as the name of a mythological person in Plutarch's *Moralia* 299 C, D.

More recently, scholars who have studied the oriental-Hellenistic background of the Hermetic Corpus, particularly of the best known of the treatises, namely, *Poimandrēs*, have taken as their point of departure, in discussing the meaning of the name, the statement made in the treatise itself in chapter 2: "I am Poimandres, the *nous* of *authentia*." Here we have the possibility, though not the certainty, that the author was attempting to convey to Greek readers the meaning of a non-Greek name. In view of the persistent tradition that Hermes Trismegistos came originally from Egypt,[4] one might suppose that an Egyptian etymology for the name *Poimandrēs* would have been suggested by Reitzenstein, one of the earliest of recent philologists to explore the oriental background of Hermetic literature and a vigorous proponent of the theory that the treatise *Poimandrēs* was chiefly influenced by Egyptian thought.[5] Reitzenstein, however, operated entirely with Greek sources in this case, since he believed that the treatise and the *Shepherd of Hermas* were based on common material and explained that "der Name Poimandres ist natürlich als redender gedacht, wie so mancher gnostische Göttername: dass man den Zusammenfall mit dem Personennamen Ποίμανδρος vermeiden wollte, ward wohl Anlass der Missbildung." But Reitzenstein did advance the discussion considerably by stressing the Gnostic connotations of the two words, *nous* and *authentia*,

[1] In A. D. Nock and A. J. Festugière, *Corpus Hermeticum* (Paris, 1945), II, 199.

[2] See Nock's note in *ibid.* on Treatise XIII. 19. He refers to a study on the *Logos Poimēn* by J. Quasten in *Heilige Ueberlieferung* ("Herwegen Jubilee Volume," ed. O. Casel [Münster, 1938]), pp. 51 ff.

[3] E.g., in Casaubon, *Exercitationes Baronianae de rebus sacris* (London, 1614), cited by F. Granger in the article mentioned below.

[4] See, e.g. Iamblichus *De mysteriis* viii. 4.

[5] Reitzenstein's arguments for Egyptian sources of Treatise I have been sharply criticized by W. Kroll, "Hermes Trismegistos," *PWRE*, XV (1912), 792–823.

used in the statement from the treatise quoted above. In the case of *authentia* he called attention to the fact that Ficino in his Latin rendering of the Hermetic literature had translated it by *potestas* and further cited Hippolytus and Irenaeus to show that the word here means "a higher power" or "das Himmelsreich."[6]

Apparently the first scholar to suggest an Egyptian etymology for the name *Poimandrēs* was Frank Granger, whose article on the treatise appeared in the same year as Reitzenstein's book.[7] Assuming that there is some merit in the statements of ancient Greek writers that the Hermetic books had first been written in Egyptian, and arguing further that *Poimandrēs* is not a plausible Greek form, Granger suggested a (Sahidic) Coptic etymology, ⲡⲙⲛⲧⲣⲉ, "the witness." Anticipating objections to this etymology, Granger cites the name *Pior* as an example of the incorporation of the Coptic definite article in a personal name and also gives examples of similar titles of ancient books, such as *The True Word* of Celsus and *The Perfect Word*, an alternative title of *Asclepius*. "The term Poemandres, therefore, on this supposition, contains an allusion to the widely spread legend of Hermes as the witness, a legend which is verified for us from several sources. But the writer has adapted the details to his purpose. Hermes is not himself the witness, but the herald of the witness."

To this etymology one might think of three objections: (1) the phonetic incongruity of the Coptic and Greek forms (on which see Scott's remarks below); (2) the fact that the meaning "witness" has no relevance to the explanation of *Poimandrēs* as "the *nous* of *authentia*"; and (3) the absence of any reference in Hermetic literature to Hermes as a witness or herald of a witness.

Granger's theory was decisively rejected two years later by Mead, who did not, however, specify his reasons for so doing. Mead did admit that the name might be of Egyptian origin but Demotic rather than Coptic, and he expressed doubt that "the witness" suits the theme. "In any case 'Man-Shepherd' was certainly the *idea* conveyed to the non-Egyptian by the name, however philologically unsound its form may be."[8]

Kroll in his important article on Hermetic literature[9] ignores the possibility of an Egyptian origin for *Poimandrēs* and assumes that it is Greek and is based on the concept of Hermes as shepherd. To passages from ancient literature illustrating this idea which had been cited by earlier scholars he adds one from Philo *De agricultura* 39 ff., in which the shepherd is treated as a symbol of the educator of mankind and ultimately as an aspect of the Nous and God.

Similarly, Eduard Meyer retains the traditional explanation of the name as "Menschenhirt" and follows Reitzenstein in translating the exegetical phrase "*nous* of *authentia*" as "der Verstand der Allmacht" and in taking it as an hypostasis of the Deity.[10]

The theory of an Egyptian origin of the name *Poimandrēs* was taken up again by Walter Scott, partly because of his dissatisfaction with Reitzenstein's assumption that the Poimandrēs of Treatise I is a

[6] Richard Reitzenstein, *Poimandres: Studien zur griechisch-ägyptischen und frühchristlichen Literatur* (Leipzig, 1904), pp. 8, 328.

[7] "The Poemandres [*sic*] of Hermes Trismegistus," *Journal of Theological Studies*, V (1904), 395–412; see p. 400.

[8] G. R. S. Mead, *Thrice-Greatest Hermes: Studies in Hellenistic Theosophy and Gnosis* (London and Benares, 1906), I, 50–52.

[9] See n. 5 above.

[10] *Ursprung und Anfänge des Christentums* (Berlin and Stuttgart), II (5th ed., 1925), 374.

shepherd and that the treatise has some connection with the *Shepherd of Hermas*. Into all the details of Scott's long discussion of the name we need not go.[11] It may suffice to note that he rejects the likelihood of a Greek origin only after a very full and fair discussion of the arguments in its favor. He also entertains the possibility that an Egyptian name has been assimilated to a Greek name like *Poimandros*, which "may have been an epithet like Hermes Kriophoros or the name of a local deity who was identified with Hermes in later times."

Assuming, then, that the Greek form *Poimandrēs* conceals an Egyptian name, Scott examines the etymology proposed by Granger. He finds fault with it on phonetic grounds, since "it is difficult to account for the substitution of the diphthong οι for the faint vowel-sound of the Coptic article," but he is prepared to admit that the meaning "the witness" might fit the name on the ground that in Treatise XII. 8 the Agathos Daimon seems to play the part of a witness. In making this generous but, it seems to me, unwarranted concession to Granger's theory, Scott cites several passages from the New Testament as parallels, among them Rom. 8:16, in which Paul says that the *pneuma* witnesses to our being children of God. But this parallel would be convincing only if it were certain that Scott is right in taking the Pauline *pneuma* to be equivalent to the *theios nous* of the Hermetists, which seems to me a doubtful assumption, and if he is right in equating the Pauline and Hermetic conceptions of "witnessing." At any rate, Scott himself admits that a better explanation than Granger's can be found.

This supposedly better explanation is supplied by the distinguished Egyptologist F. Ll. Griffith, who seems not to have published it but to have made it privately to Scott. The latter reproduces it as follows:

> Ποιμάνδρης is the Coptic ⲡ-ⲥⲓⲙⲉ-ⲛ-ⲣⲏ, "the knowledge of the Sun-god." (He tells me that ⲣⲏ "the sun" is usually preceded by the article ⲡ, but that the omission of the article is not unparalleled in late times, and that ⲣⲏ without the article would have a more learned and solemn appearance than the ordinary ⲡ-ⲣⲏ.)

After dealing briefly with the phonetic correspondence of the Coptic and Greek forms, Scott proceeds to consider the correspondence in meaning.

> If we assume that it [ⲥⲓⲙⲉ] is here used as an equivalent for the Greek *νοῦς*, *Poimandres* would mean "the *νοῦς* of the Sun-god"; and seeing that not only in Egypt but in the Roman empire at large the sun was very generally regarded as the supreme God, this name might very well be taken to signify that which the writer of Corp. I says it denotes, namely *ὁ τῆς αὐθεντίας νοῦς*," the mind of the Sovereign Power" (*i.e.* of the Supreme God).

Scott concludes his discussion of the name by quoting passages from Hippolytus and Epiphanius to show that *authentia* could very well mean "supreme authority" or "the sovereignty of God."

With Scott's interpretation of the Greek phrase most scholars versed in Gnostic and semi-Gnostic literature will readily agree. And no one is likely to find fault with Griffith's suggestion that the syllable *poim* represents Coptic ⲡⲥⲓⲙⲉ and is equivalent to *nous* and, in this context, can mean "understanding" or "reason" as well as "mind" and "knowledge." But Griffith's idea that the latter part of the Greek name, *andrēs*, represents Coptic ⲛ̄ⲣⲏ seems to me to cause difficulties. Aside from the objection which one might make, though admittedly on rather subjective grounds, to Griffith's explanation

[11] *Hermetica* (Oxford, 1925), II. 14–18.

of the absence of the Coptic definite article which is usually placed before the word *Rē* or "sun," there is the further objection that Re or Helios corresponds only loosely to *authentia*, "sovereignty." Moreover, while it is true that Helios appears as a lower demiurge in Gnostic literature,[12] it would seem awkward to have Helios connected with *nous* in a treatise which tells how the fictive narrator was enlightened about the nature of the universe by his god, *nous*, whose divine son is the "luminous Logos." The close proximity of references to Helios and the luminous Logos as agents of enlightenment would not, in my opinion, be in keeping with the structure of the treatise, which is clear in outline if not always clear in particular statements.

It seems to me that another Coptic equivalent for *authentia* might be found which would be more in keeping with the context and with the general structure of a treatise so full, as is *Poimandrēs*, of partly Gnosticized Greek ideas and terms derived in large part from Stoicism. In offering a new etymology, I assume that, while the name *Poimandrēs* is Egyptian in origin, the disguised original form was in turn based on Greek terminology; in other words, a Greek phrase was translated into Egyptian and then retranslated into (differently worded) Greek by the author of the treatise.

The etymology here proposed is Coptic ⲡⲉⲓⲙⲉ ⲛ̄ⲧⲙⲛⲧⲉⲣⲟ,[13] which in this context would mean "the reason of sovereignty." In broad phonetic transcription the phrase would be *peimentmentero*. Because of the reduplication of the syllable *ment*, it would not be unlikely for haplophony to occur, giving a form *peimentero*. This, in turn, especially through its resemblance to the Greek name *Poimandros*, might easily have become Hellenized as *Poimandrēs*.

Not only does this reconstructed Egyptian form or nominal phrase closely correspond in meaning to the Greek "*nous* of *authentia*" but it also seems to offer a clue to the philosophical connotation of the name. If we remember that in Late Egyptian, including Coptic, there were few true adjectives and that a phrase like "the holy man" was expressed by the construction "the man of holiness" or "the man who was-holy" (the latter compound being intended to represent the Egyptian use of relative auxiliary and qualitative form of the verb), we see that the assumed meaning of *Poimandrēs*, "the reason of sovereignty" is equivalent to the Greek or English phrase "the sovereign reason."

Thus we are led to the further discovery that the name *Poimandrēs* reflects the Stoic concept of "the sovereign reason," *to hēgemonikon* (*meros lēs psychēs*), which they identified with *logismos* and *dianoia*, and later writers, like Philo and Plotinus, with *nous*.

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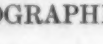
[12] See, e.g., the passage from Stobaeus, cited by Kroll, *op. cit.*, p. 807, who follows Cumont (*La Théologie solaire*) in attributing Hellenistic solar theology to Syrian sources mediated by Posidonius.

[13] This is the usual Coptic spelling according to W. E. Crum, *A Coptic Dictionary* (Oxford, 1939), p. 299*b*.

NEUES MATERIAL ZUR BEURTEILUNG DER SYLLABISCHEN ORTHOGRAPHIE DES ÄGYPTISCHEN

ELMAR EDEL

In der Beurteilung der ägyptischen syllabischen Orthographie stehen sich zur Zeit zwei recht extreme Auffassungen gegenüber; W. F. Albright[1] sieht in der syllabischen Schreibung ein Mittel zum Ausdruck der Vokale, während W. F. Edgerton[2] wohl so ziemlich alle von Albright für die syllabischen Gruppen erschlossenen Silbenwerte verwirft. In meinem Aufsatz über die neuen keilschriftlichen Umschreibungen ägyptischer Namen aus den Boğazköytexten[3] habe ich einige Gleichungen zwischen keilschriftlich und hieroglyphisch-syllabisch vorliegenden Namen aufgestellt, die für die Beurteilung der syllabischen Schrift im Sinne Albrights sprechen (*op. cit.*, Nr. I, = ^{m}*A-ia;* Nr. II, = ^{m}*A-ni-ia;* Nr. XIV, = ^{m}*Su-u-ta;* Nr. XV, = ^{SAL}*Tu-*[*ia*]; Nr. XVII,  = ^{m}*Zi-na-*(*a*)*-pa;* Nr. XX, = ^{m}*A-pi*). Jetzt möchte ich zwei weitere Gleichungen bringen, die als hieroglyphische Umschreibungen keilschriftlicher Namen nicht in den Rahmen des erwähnten Aufsatzes passten, die aber für die Bewertung der syllabischen Orthographie recht aufschlussreich sein dürften.

I. = ^{m}*Ti-li-*^{d}IŠKUR

In den in Boğazköy gefundenen Ägypterbriefen aus der Zeit Ramses II. taucht ^{m}*Ti-li-*^{d}IŠKUR als Name eines Boten Ḫattušils III. bezw. seiner Gemahlin Puduḫepa an folgenden Stellen auf: 1965/*c*+, Vs. 11; Rs. 3, 15, 22; 1353/*c*+, Vs. 16; 132/*e* + Ankara 9131, Vs. 10, 16, 18;[4] 507/*i*.[5] Der Name sieht hurritisch aus, sodass das Ideogramm für den Wettergott phonetisch Tešub zu lesen wäre; so kommt auch der bekannte hurritische Name Urḫitešub in den Ägypterbriefen stets in der Schreibung ^{m}*Urḫi-*^{d}IŠKUR vor (*KUB*, III, 22, Vs. 9, und sonst). Die Lesung Tilitešub wird jedoch dadurch zur Gewissheit, dass in der hieroglyphischen Einleitung des berühmten Hethitervertrags als Bote Ḫattušils III. ein Mann namens erscheint, der ohne Zweifel mit unserem ^{m}*Ti-li-*^{d}IŠKUR identisch ist.[6a] Albright hat in *VESO*, S. 63 unter D 6, für das hieroglyphische *Tr/ltsb* bereits die Lesung *Ti-ra-t*(*a*)*i-s-ba* vermutet und daraus keilschriftliches *Tillatešub erschlossen—eine Form, die also in der Tat gar nicht so weit von der richtigen Namenform abliegt.

[1] *The Vocalization of the Egyptian Syllabic Orthography* (= *VESO*) (1934).

[2] "Egyptian Phonetic Writing, from Its Invention to the Close of the Nineteenth Dynasty," *JAOS*, LX (1940), 473 ff.

[3] *JNES*, VII (1948), 11 ff.

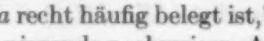
[4] Dieses Brieffragment wird demnächst durch Dr. Kemal Balkan in einer türkischen Keilschriftpublikation veröffentlicht werden.

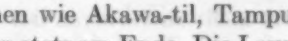
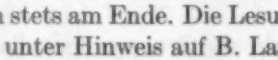
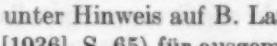
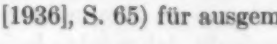
[5] Gehört mit direktem Anschluss zu 283/*b* und 419/*b*; Nachprüfung und Zusammensetzung in der Türkei zur Zeit nicht möglich, da die Originale noch verlagert sind.

[6] W. M. Müller, "Der Bündnisvertrag Ramses' II. und des Chetiterkönigs," *MVAG*, VII, 5 (1902), Taf. II. Z. 5. Zu verbessern nach *JEA*, VI (1920), Taf. XVIII, in Übereinstimmung mit den Photographien, die mir Professor Keith Seele aus der Photographiensammlung des Oriental Institute, Chicago, liebenswürdigerweise zur Verfügung stellte, wofür ich ihm auch an dieser Stelle nochmals meinen Dank aussprechen möchte.

[6a] Vgl. Edel, *JNES*, VII (1948), S. 17–18.

Zur hurritologischen Seite des Namens wäre noch Folgendes zu sagen: Während das Element *tilla* recht häufig belegt ist,[7] konnte ich das Element *tili* in der mir zugänglichen Literatur nirgends nachweisen. Auf meine Anfrage teilt mir nun Professor E. A. Speiser freundlichst Folgendes mit: Das Element *tili* ist bisher tatsächlich unbekannt; *til* ist belegt in Namen wie Akawa-til, Tampuš-til, $^{\text{SAL}}$Tilunnaja; *tilla* steht in zusammengesetzten Namen stets am Ende. Die Lesung $^{\text{d}}$IŠKUR als Tešub hält Speiser in dem vorliegenden Namen unter Hinweis auf B. Landsberger (*ZA*, N.F. I [1924], 228) und A. Ungnad (*Subartu* [1936], S. 65) für ausgemacht.

II.  = $^{\text{d}}$*Ka-ar-zi-iš*

In der Schwurgötterliste der hieroglyphischen Übersetzung des Hethitervertrags steht zwischen den syllabisch geschriebenen Götternamen  und  ,[8] in denen man die hethitischen Götternamen Zitḫarijaš und Ḫapantalijaš erkannt hat,[9] ein weiterer, jedoch schlecht lesbarer Name, den Müller so liest:  ; zu dem zerstörten Zeichen über dem Fremdland bemerkt er: könnte  oder sein; U. Bouriant (*RT*, XIII [1890], 157, vorletzte Zeile) gibt . Es kann nun kein Zweifel bestehen, dass wir hier eine Umschreibung des hethitischen Götternamens Karziš vor uns haben;[10] dieselbe Reihenfolge Zitḫarijaš, Karziš, Ḫapantalijaš kehrt auch in sonstigen hethitischen Verträgen wieder (E. Weidner, *Politische Dokumente* [1923], S. 31; J. Friedrich, *Staatsverträge des Ḫatti-Reiches* [1926], S. 14 und 112). Es ist also evident, dass als letzte Gruppe vor dem Fremdlanddeterminativ, wie ja auch Müller zweifelnd zu sehen glaubte, dastand, wodurch ebenso wie in der Umschreibung des Namens Ḫapantalijaš die hethitische Nominativendung -*š*[11] wiedergegeben wurde. Es springt auch sofort in die Augen, dass hier ebenso wie bei der Umschreibung des Namens Zitḫarijaš der Vokal *i* durch die Kombination von und [12] ausgedrückt wird; die gleiche Gruppe kehrt allein als Bezeichnung eines wortanlautenden *i* in der Umschreibung = Išḫara wieder (Z. 29 unseres Vertrags, bei Müller, *op. cit.*, auf Taf. XIII).

Um jedem nur denkbaren Einwand gegen die von mir geforderte Lesung *K.r.ḏ.i.š* zu begegnen, muss ich noch darauf hinweisen, dass die Lesung *Krḏnr*(?) (so Langdon und Gardiner, *loc. cit.*) ganz ausgeschlossen ist; sie beruht darauf, dass K. Sethe bei seiner Kollation des Hethitervertrags das langgestreckte, schmale, aber auch auf

[7] Stets als letztes Kompositionsglied, vgl. A. Gustavs, "Namenreihen aus den Kerkuk-Tafeln," *MAOG*, X, Heft 3 (1937), S. 15 ff., 51 f.; I. J. Gelb, *Hurrians and Subarians* (*SAOC* No. 22), S. 54, Anm. 37.

[8] Müller, *op. cit.*, Taf. XII, Z. 28; das Determinativ für "Fremdland" beruht auf einem Missverständnis des ägyptischen Übersetzers, der das Determinativ $^{\text{d}}$ = sum. DINGIR, "Gott," der keilschriftlichen Vorlage als Ideogramm auffasste und durch *p³ nṯr* übersetzte. In dem Götternamen erblickte er einen Ländernamen und knüpfte ihn mit der Genetivpartikel *n* an *p³ nṯr*, sodass beispielsweise aus $^{\text{d}}$Zitḫarijaš ein *p³ nṯr n Z.i.ṯ.ḫ.r.i.j.š* (Det. für "Fremdland"), "der Gott von Zitḫarijaš," wurde.

[9] S. Langdon und A. H. Gardiner, "The Treaty of Alliance between Ḫattušili, King of the Hittites, and the Pharaoh Ramesses II of Egypt," *JEA*, VI, 196.

[10] So auch Langdon und Gardiner, *op. cit.*, S. 194 und 196.

[11] Ausgesprochen -*s*; vgl. Friedrich, *Hethitisches Elementarbuch* (1940), I, § 28*b*; den dort als Belegen angeführten ägyptischen Umschreibungen wie *Mrsr* für Muršil wären die hier besprochenen Umschreibungen zuzufügen. Hethitische Nominativendung bei einem hethitischen Götternamen inmitten eines akkadischen Kontextes, wie wir ihn für die hethitische Originalfassung des Vertrags vorauszusetzen haben, darf nicht überraschen; vgl. gerade für unsere Götternamen den akkadisch geschriebenen Vertrag zwischen Šuppiluliuma und Mattiwaza bei Weidner, *op. cit.*, S. 30, Z. 44 mit Z. 45.

[12] Von Albright, *VESO*, durch *ʾ* transkribiert; vgl. die Beispiele auf S. 35 unter *C*.

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der Photographie des Oriental Institute mit Müller und Bouriant klar lesbare Zeichen für die Insel ⟨⟩ als dicken Strich wiedergegeben hat (*JEA*, VI, Taf. XVIII zu Z. 28), was Gardiner offenbar als Andeutung eines verwitterten — = *n* verstand. Die Lesung *n* suggerierte weiterhin die Ergänzung des Wortauslauts zu der bekannten Gruppe , über deren Unhaltbarkeit wohl kein Wort mehr zu verlieren ist.

Es ist im Folgenden nicht meine Absicht alle Gruppen der syllabischen Orthographie zu besprechen—umso weniger da Albright, wie ich höre, weiteres Material gesammelt hat und gelegentlich zu veröffentlichen gedenkt. Ich möchte lediglich kurz zusammenfassen, was mir aus den hier gebrachten Gleichungen hervorzugehen scheint.

1. Endgültig widerlegt ist nach meinem Dafürhalten wohl die von Albright, *VESO*, S. 31, postulierte Lesung *ra* (*la*) für die Gruppe ;[13] allein im Hethitervertrag zähle ich nun schon vier Fälle, wo hethitisches *li* durch  wiedergegeben wird (in den Umschreibungen der Namen Ḫattušil, Muršil, Liḫšina und Tilitešub).

2. An die Lautwerte ,  = *ta* (*VESO*, S. 31, XIX *A*) und  = *ba* (*op. cit.*, VI *A*) vermag ich nicht zu glauben aus Gründen, die mir Edgerton in seinem schon mehrfach zitierten Aufsatz vorweggenommen hat; wenn wir jedoch ,  = *t* und  = *b* lesen, kann meines Erachtens die Umschreibung  nur gewinnen, denn ein *t.e.š.b* für Tešub hört sich entschieden besser an als *t(a)i.š.ba*, wie Albright nach *VESO*, S. 63, D 6, umschreibt.[13a]

3. Die Wiedergabe von *ti* durch  ist dagegen eine glänzende Bestätigung des Albrightschen Ansatzes in *VESO*, S. 31, XIX *D;* es bleibt allerdings immer noch darauf zu achten, dass nach den Beispielen bei M. Burchardt, *Altkanaanäische Fremdworte und Eigennamen* (1909/10), § 130, die Gruppe  auch für die blosse Femininendung vorzukommen scheint, sodass man gut daran tun wird, weitere Gleichungen abzuwarten.

4. Ausgezeichnet bestätigt sich auch der Ansatz von  und  als *i* oder *e*, über den ich bereits bei Nr. II gesprochen habe.

Im übrigen glaube ich in der syllabischen Schreibung eine Mischung von alphabetischer und Silbenschrift sehen zu müssen. Als alphabetisch betrachte ich (in Übereinstimmung mit Edgerton) alle Gruppen, die Albright als *a*-haltige Silbenzeichen ansetzt, aber auch Gruppen wie , , , , , , usw., die ich nicht, wie Albright, *pu, tu, su, pi, ti, si*, sondern *p-u, t-u* usw., umschreiben möchte, da meines Erachtens die hier vorliegende Vokalbezeichnung von der der Ächtungstexte ( für *i*,  für *u*)[14] nicht prinzipiell getrennt werden kann.[15] Als syllabisch möchte ich dagegen mit Albright, *VESO*, S. 31, folgende Gruppen ansprechen: VI *B* (*bi*), IX *C*, *D* (*nu*), X *C* (*ru*), XIV *C* (*si*), XVII *C* (*ku*), XIX *D* (*ti*), und XX *A* (*ti*).

[13] Bereits von Edgerton, *op. cit.*, S. 496 ff., abgelehnt.

[13a] Ohne Vokalbezeichnung wird Tešub, wie Sir Alan H. Gardiner erkannt hat, in dem Namen  (= Ini-tešub) geschrieben, vgl. Barnett-Černý, *JEA* XXXIII (1947); auch hier wäre die Lesung Ta-b-ša für Tešub, wie man nach Albright zu umschreiben hätte, alles andere als befriedigend.

[14] G. Posener, *Princes et pays d'Asie et de Nubie* (1940), S. 63.

[15] In der 19. Dynastie ist  als Vokalbezeichnung bereits durch  ersetzt; beispielsweise darf ,  (= *t*) nicht mit  (= *t-i*) zusammengeworfen.—Wo  und  zusammentreten, muss in hieroglyphisch geschriebenen Inschriften  nicht immer = *i* sein, vgl. die oben aufgeführte Umschreibung für Išḫara und Burchardt, *op. cit.*, § 79 (Ende); die spezifisch hieratische Gruppe , *r*, *l* bezweckt keine Vokalschreibung (*VESO*, S. 31, Ur. X D).

Besser als durch alle Worte lassen sich die verschiedenen gegenwärtigen Auffassungen vom Wesen der syllabischen Orthographie durch eine Gegenüberstellung der verschiedenen Transkriptionsweisen der in diesem Aufsatz behandelten Schreibungen sinnfällig machen: Während nach Albright Nr. I *Ti-la-t(a)i-s-ba* und Nr. II *Ka-r-ḏi-t-sa* zu lesen wären, hätten nach Edgerton nur die Konsonanten zu gelten: *Tltsb* und *Krḏs*. Ich selbst glaube mich für *Ti-l-t-e-s-b* und *K-r-ḏ-i-t-s* entscheiden zu müssen, denn es erscheint mir unmöglich bei diesen Wörtern oder gar bei (Ramsesvertrag, Z. 38) = *P-u-t-u-ḫ-e-p*, hethitisch Puduḫepa, die Tatsache der Vokalschreibung zu leugnen. Vor einer endgültigen Stellungnahme zu den Problemen der syllabischen Schreibung aber wird man entschieden mehr Material an tragfähigen keilschriftlich-hieroglyphischen Gleichungen abwarten müssen als bisher vorliegt. Wenn mein Aufsatz an der Bereitstellung dieses Materials zu einem bescheidenen Teil beigetragen hat, so ist sein Zweck erfüllt, auch wenn meine Art die Dinge zu sehen im Sinne des einen oder anderen Extrems zu revidieren wäre.

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REVIEW ARTICLE

NUZI PERSONAL NAMES[1]

ERNEST R. LACHEMAN

ONLY twenty-five years have elapsed since the late Edward Chiera began his excavations at Yorghan Tepe, near Kirkuk, yet the greater proportion of all the material excavated has been published, and more is known about ancient Nuzi than about any other Near Eastern site. More monographs about the various aspects of its civilization have been published than for any other corresponding period or place. The present volume[2] is the crowning achievement of all these publications. It certainly will be the keystone of the arch of Nuzi studies, indispensable for any student of the complex which is the Nuzi civilization. This is self-evident. The personal names represent, if one is allowed a pun, the very "personality" of Nuzi. One cannot approach the study of any of its facets—the ethnological problem, the legal organization, the social structure, the real estate deals, the loans, the armaments, or the seal impressions—without immediately becoming involved in a study of personal names, of interrelations of families, their genealogies, etc.

None can measure the importance of this book but those who have eagerly, and at times impatiently, waited for its appearance. And none can measure the amount of work involved in its preparation but those who have followed with admiration the patience and the exactness with which the authors have collated every available text, checked and cross-checked every personal name and family relationship, and listed with caution every element of the names. Even though a list of personal names existed (cf. p. 2), it was only a guide, and the work had to be done almost from scratch. The result is a monumental achievement of which the authors may rightly feel proud. My bold additions and remarks are but a feeble acknowledgment of their scholarly accomplishments.

Each of the three authors is responsible for the section of the book which bears his name.

In the Introduction, Dr. Gelb gives a brief and accurate résumé of the discovery of "Nuzi," of its excavations, and of the plans for the publication of the Nuzi personal names. The system of transliteration adopted and a brief section of statistics on the names are included.

It is interesting to note that in practically all monographs on Nuzi matters a history of excavations at Nuzi (sometimes with a number of errors) is given, in order to explain, I imagine, the complete ignorance of Nuzi and its culture. (I have noticed that sometimes the same is true about Ras Shamra.) To date, the most complete account, as far as I can judge by the information given me by the succeeding directors of excavations, is that of Starr, in *Nuzi*[3] I xxxiii–xxxvi. Chiera did not begin his excavations at the mound called Yorghan Tepe on the British survey maps, but at a "small rise three hundred meters north of Yorgan Tepa." In a paper presented before the American Oriental Society in 1942, I showed that it was wrong to call these the houses of Teḫip-tilla, Šurki-tilla, and Zike, but that they should be called the houses of Teḫip-tilla, Ḫutija, son of Kuššija, and Šilwatešup, son of the king, respectively. Furthermore, these houses were a suburb of Nuzi, probably called Unapšewe. So far, most of the

[1] A review of Gelb, Purves and MacRae, *Nuzi Personal Names* ("Oriental Institute Publications," Vol. LVII [Chicago: University of Chicago Press, 1943]).

[2] One should apologize for having waited so long to finish this review. In order to make a thorough survey of the value of this book, the reviewer tried to prepare a similar work for the personal names of the tablets in the Harvard Semitic Museum—an undertaking which, done singlehandedly, at times seemed insuperable.

[3] Quoted as "*Nuzi* I" in the following pages.

tablets published come from this suburb (HSS IX and AASOR XVI have a few from the main mound which was probably Nuzi proper). In this volume, as in this review, "Nuzi" is used in a very general sense, to cover even the tablets found in Kirkuk itself, ancient Arrapḫa (or *Âl Ilâni*). This use seems now to have been commonly accepted. Therefore it is safe to assume that the names studied in the present volume belong to four different groups: those from Arrapḫa, published by Gadd and Contenau; those from the archives of the families of Teḫip-tilla and Ḫutija; those from the archives of Akkuja, father of Zike, and of Prince Šilwa-tešup; and a few from the main mound where the palace, the temples, and a number of privately owned houses stood. (Some tablets in private collections come from the first and perhaps the fourth groups.) A study of these four groups shows that, with the exception of the scribes and certain government officials, the personal names of one group of tablets are found but rarely in the tablets of another group. Sometimes the similarity of names, including paternity relationship, is purely accidental. Such is the case of Ennamati, son of Ar-tešup, who is mentioned in two documents from Arrapḫa (RA XXIII 38:29, 43:25), and one from Unapšewe(?) (RA XXIII 64:11). Since these documents belong to different generations (Wullu, son of Puḫi-šenni, and Zike, great-grandson of Teḫip-tilla, son of Puḫi-šenni), the same name represents two different individuals. (Purves' remark, p. 199, col. i, is not quite right. In one case, Enna-mati, son of Ar-tešup, and Ennamati, son of Al-tešup, are both from Unapšewe, but they are not the same person since they are generations apart.)

In passing, I should like to correct a false impression which might arise from the explanation given for the abbreviation HMN (p. xiv, col. i). This abbreviation was used by Chiera for the tablets he found in the so-called "suburban house" of Zike. These were later shipped together with uncatalogued tablets. Since these shipments of mixed groups of tablets arrived at different times at the Harvard Semitic Museum, it was felt that a new system of numbering was necessary, and the code letters SMN were adopted. Only a few HMN tablets failed to arrive in this country. (They may have been stolen by the native diggers after Chiera had catalogued them.) These are the tablets referred to as HMN in this volume. We had Chiera's transliterations of these tablets; thus they are not entirely lost to Assyriology. In HSS V the catalogue numbers are all HMN numbers, for these texts were copied *in situ* soon after their discovery. In all other HSS publications only SMN numbers are used. All HSS V texts have now become SMN 1301 ff., in the order of this volume.

I shall not deny that I am greatly disappointed that the SMN material was not incorporated in its entirety in the present volume. It would have been feasible (the present writer has collected most of it), but especially it would have obviated the necessity for another publication which in many ways will duplicate the present one (old and new elements, etc.). It would have shown the differences and the relations between the populations of Nuzi, Unapšewe, and Arrapḫa. Most Nuzi studies have greatly suffered from the fact that they have been based on an incomplete knowledge of all the texts, published and unpublished; they thus tend to give a distorted picture of Nuzi. The present authors escaped this danger only because they had sufficient information about the unpublished texts (though they did not know the content of a very large number of tablets and fragments—Miss Porada's list of seal impressions includes the names of owners of seals on tablets in Chicago which are not listed here!).

There is no more vexing problem than that of trying adequately to transliterate non-Akkadian languages with a system originally devised for Akkadian, and this in a more or less haphazard fashion.[4] The spelling of names and their variants has been given with the "first and most common value" of the cuneiform signs (first, I presume, according to Thureau-Dangin's system of transliteration). The dis-

[4] I have read Gelb's "Memorandum on Transliteration and Transcription of Cuneiform," but still feel that it is inadequate, particularly in the case of the Nuzi texts.

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crepancy between such transliteration and etymology and normalization of names is obvious. In view of the fact that Gelb will clarify his position on the subject in a forthcoming article, I shall not elaborate on my own impression that from both the theoretical and practical points of view the present systems of transliteration in cuneiform languages are antiquated and leave much to be desired.

The names have been standardized or normalized by Dr. Gelb (p. 3). The system seems to follow, as far as non-Akkadian names are concerned, the views published by Purves in various articles (as opposed to Speiser's views).

All voiced and emphatic stops have been reduced to voiceless stops, except in the case of recognized Semitic and Sumerian names: "Although there were differences in the voicing of consonants in Hurrian speech, they were merely phonetic, not phonemic" (p. 187). Yet this is by no means absolutely certain. While this volume has gone a long way in studying Hurrian phonetics in Nuzi and elsewhere, the relationship of Akkadian and Hurrian phonetics and the possibility of local differences have not been given sufficient attention. Hurrian texts from Tell Amarna, Ras Shamra, Boğhazköy, the first Babylonian dynasty, etc., are used interchangeably, as though no local differences in phonetics existed! Since the Semitic texts from the same places and times show great variations in phonetics, one should presuppose the same fact for Hurrian. I refer especially to two articles by Purves (AJSL LVII 172–87 and LVIII 378–404).

For the guide names all consonants are reduced to their voiceless forms. Thus *Ge-el-te-ia* is normalized KEL-TEḲA, even though Gelb admits that in "Nuzi the sign GI has regularly the value *ge*." The same system is used by Purves for the name elements, where all the consonants are given as voiceless whether they are "initial and contiguous" or "occurring singly after vowels and adjacent to sonants." In the case of the labials especially I believe that much has yet to be done before one can prove definitely that the signs *bi*, *ba*, *bu* have to be read uniformly *pi*, *pá*, *pu* and *pè* in Nuzi Hurrian.

Gelb admits that single and double consonants interchange frequently, but I think he is overly cautious when he lists separately names with single consonants and those with double consonants. Spellings like *I-ki-ia* and *Ik-ki-ia*, son of *Pu-i-ta-e; Zi-ni-ia* and *Zi-in-ni-ia*, scribe (with the same handwriting); *Qa-an-ku-zi-i* and *Qa-an-ku-uz-zi* for the same district in related documents prove beyond doubt that they are two forms of the same name. (Cf. the spellings *Ta-ak-ku*, *Ta-a-ku*, *Ta-ku*, and *Ták-ku* referring to the same person.) Since in most cases an initial diphthong is involved, this is a problem of the length of the vowels.

The problem of hypocoristic elements and other diphthongs is another vexing one and there is no question that the Hurrian scribes of Nuzi must have been puzzled as to how to write them adequately, as the great variety of hypocoristic endings indicates. Names ending in consonant plus *a* (e.g., *-ka*) are listed in four different ways: *Ḫa-nu-qa* is distinguished from *Ḫa-nu-qa-a-a*, *ᶠḪi-in-zu-ra* from *ᶠḪi-in-zu-ra-a-a*; but *Ḫa-na-aq-qa* is listed with *Ḫa-na-aq-qa-a*; *A-qa-la-a* with *A-qa-la-a-a*; *Šu-ru-uk-ka* is distinguished from *Šu-ru-uk-ka-a* and *Šu-ru-uk-ka-a-a*. The basis for distinguishing the first and fourth is the lack of genealogical proof. Yet a name like *ᶠTup-pè-le-en-na*, *ᶠTup-pè-le-en-na-a*, and *ᶠTup-pè-le-en-na-a-a* (SMN 594, 406, 135) in almost similar lists of names refers to the same person. I propose therefore that the hypocoristic element was *-aį*, not *-aja*. This diphthong could not be otherwise exactly written (cf. *A-i-it-ta-ra*, *A-it-ta-ra*, *At-ta-ra*). This would eliminate the value *aju* suggested for the compound A.A. The evidence for this is faulty. I have collated all the passages for *ᶠḪašip-šaju* and there is no reading *ᶠḪa-ši-ip-ša-a-a*; the same is true for *ᶠMušup-šaju*. (See corrections below.) Again, what we have here is simply the diphthong *aį* before the vowel *u*. This would apply particularly to the name Tajuki. The scribes would not write *a-i* if the sound were *aja*, but could write *a-a* if the sound were *aį*.

The complexity of Nuzi Hurrian phonetics is primarily due to the use of the complex cuneiform writing by Hurrian scribes unfamiliar with the Akkadian phonetics underly-

ing the cuneiform system. They had sounds which stood between voiced and voiceless stops and could be represented by either.

This volume has become a sound point of departure for our study of Hurrian linguistics and Nuzi culture. The remarks above are the result of a study of this volume, and I only wish I had had it when I prepared the transliterations for HSS XIII. It would have saved me from many mistakes.

After comparing the list of personal names with the unpublished material, I should like to make the following remarks and corrections.

ᶠAḪÂT-KÛBI: SMN 518 has ᶠ*A-a-ḫa-at-ku-bi*.

AKAḪA: 10) Correct to (4) SMN 803.

AKAM-NANI: Cf. ᵒ*A-kap-na-ni*.

ᵈAK.KI.LA: Read ᵈ*Nabû-ila* by Speiser. The third sign is plainly *tág*, not *ki*. In Nuzi the sign *tág* is almost like *ki*, except that the last vertical is double.

AKIP-ŠARRI: 9) AASOR XVI 59:34 has *A-kip-šarri*ᵗᴵ.

AKIP-TEŠUP: 2) *mâr šarri* (2) JEN 578:20, 25; add the reading of the seal impression: *A-gi-te-šu-up mâr Ki-ip-te-šu-up* (the personal names on seal impressions have not been listed in this volume). Cf. BASOR No. 81, pp. 10–11, for other readings from SMN texts. The identification of Akip-tešup with Akit-tešup is made on the occurrence of both names with the title *mâr šarri*, but they might have been two different persons. Cf. Itḫija and Itḫi-tešup, both called sons of the king but each with different seals. (Cf. Purves, AJSL LVII 178, n. 1.)

AKKUḪA: 10) Read JEN 578:17, 30.

AN.KURU₆.MA-*zi-la-gu*: I wonder if the scribe did not confuse this with the ideogram for ᵈ*Ištar* (almost the same sign) and consequently with the verb *aštamar*? I found the same mistake in a text from Kirkuk in the Yale Babylonian Collection.

ᶠANZA-PEKI: My reading *ilti-ṣabat-irṣitim* in HSS XIII (*passim*) is unjustified, in view of the spelling ᶠ*An-za-be-ki-i*.

ARIḪ-ḪARPA: 1) (13) SMN 784. 15) (11) SMN 3482.

ARIP-ḪURRA: 5) SMN 3107 has *A-ri-ip-ḫur-ra*.

AR-PAPA: 1) Read *Ar-ba-ba-a*.

ARPUḪA: Since there is a name *Ar-teja* I do not see any reason to correct JAOS LV 1:38 to *Ar-p*[*u**-*i*]*a* which could as easily be *Ar-t*[*e-i*]*a*.

AR-ŠATUḪA: 13) AASOR XVI 74:29 has plainly *Ar-tar-wa*, with the final element **tarwa**, as found in *Tarwa-zaḫ*.

AR-TEḪA: 37) Add: f. of *Ku-la-ḫu-bi*, (3) AASOR XVI 61:5.

AR-TEŠUP: 51) Add: TCL IX 21:3.

ATAL-TEŠUP: There is no family relationship to prove that *A*-RI-*te-šup* is to be read *A-tal-te-šup*. In fact, *A*-RI-*te-šup*, s. of *Puḫi-še-en-ni*, is to be compared to *Ar-te-šup* and *A-ri-te-šup*, f. of *Pu-ḫi-še-en-ni* (var. *Pu-ḫa-še-ni*).

EKEKE: 9) Read *Pa-iš-ku-um-ma*.

ELḪIP-TILLA: 11) AASOR XVI 32:24: read *El-ḫi-ip-til-la* (so on tablet).

EN-ŠUKRU: 12) Add: l. 29.

ETEḪA: 12) Read l. 9.

ḪAIŠ-TEŠUP: 14) Add: (2) HSS V 50:12.

ᶠḪAŠIP-ŠAḪU: 1) SMN 429:5 reads ᶠ*Ḫa-ši-ip-ša-a-a-ú*.

ḪUPITAḪA: 4) Read l. 50.

ḪUTANNI-TEŠUP: Read *Ḫu-ta-an-ni-te-eš-šup*. Between *eš* and *šup* there is a sign like that which stands for BULÙG, perhaps to be read RU. In the same tablet that sign is found in *Te-eš-šup-ni-ra-ri* (third sign). This is probably the same sign as in JEN 78:45, which I would prefer to read *Balṭu-šar-ru*$_x$ rather than *Balṭu-šar* BULÙG. This is probably the Nuzi form of *rú*.

ḪUT-TEŠUP: Add: *mâr šarri*, SMN 3031; BASOR No. 78, p. 18.

ILA-NÎŠŪ: 32) Correct JEN 350 to 330.

ᶠITḪUM-ALLA: Written in SMN 1613 ᶠ*Itḫu-umalla*ᴵᴬ. In spite of the presence of the element **alla** elsewhere, this could be read ᶠ*It-ḫumalla*, in view of the name ᵈ*Ištar-Ḫumella* (AASOR XVI p. 99). Cf. the change Šarumalla and Šarumelli.

KERAR-TEŠUP: There is no var. (2) in SMN 3482.

GIMILL-TEŠUP: 2) SMN 60:2 (HSS XIII 10) is written *Ki-mi-li-te-šup*.

KIP-KEWAR: Var. (4) is written *Ki-ip-ge-war*.

KURMEḪA: 2) s. of *Ge-li-ia*.

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MITTAR-ATTI: Cf. the vars. *Mi-in-ta-ra-at-ti* (SMN 291:23) and *Mi-in-ta-ra-ti* (SMN 1458).

ᶠMUŠUP-ŠAḪU: SMN 599 reads ᶠ*Mu-šu-up-šá-a-a-ú*.

NABU-TAKLA: TCL IX 6:5–6 has *A-ri-ip-pár-ni* [*mâr*] ᶠ*Na-bu-ut*ᵘ*-ta-ak-la*.

NÛRIḪA: 11) Wrong reference.

PAI-TILLA: 3) AASOR XXIV, No. 887, is the seal impression of Pai-tilla, s. of Ḫutiḫa (JENu 45). Even though it is a different seal impression from that of Pai-tilla, s. of En-[. . .] (No. 484), the signs *en* and *ḫu* are easily confused.

PAŠŠI-TILLA: Var. 3) does not exist. SMN 2369 is var. 1). Since the tablets mentioning Paššiḫa and Pašši-tilla, s. of Pula-ḫali, come from the same room and certainly refer to the same person, we have here a clear case of hypocoristic formation.

BETAŠ-ŠURA: To be read *Tiltaš-šura*. Cf. *Ti-il-ta-aš-šu-ra sukallu* (SMN 927:7).

SIN-IMITTI: 1) Read ᵈ*Sin-qa-mi-il*.

ᶠŠARUM-ALLA and ᶠŠARUM-ELLI are the same person (SMN 2597: d. of *E-ḫé-el-te-šup;* SMN 2663: d. of *Eḫ-li-te-šup*). Both documents come from the archives of Ḫampizi, s. of Ar-šatuḫa.

ŠÛR-ADAD: Cf. *Šu-ra-at-ta* (SMN 3593).

TAIKA 8) and TAIMA 3): *Na-ak-ku-uš-šu* and *aššābu* are words used in lists of soldiers for those who were either released from or remained in the army. For the meaning of *na-ak-ku-uš-šu*, cf. Goetze in *Language*, XV, No. 4 (1939), 215–20.

TAKLĀK-ILU: 1) The sign *na* in *Ta-ak-na-ki-ilu* (SMN 2167) could certainly be *la*.

TAKUḪLE: The sign *ku* in *Ta-ku-uḫ-le* in SMN 3593 is clear but might be a scribal error for *lu*, and thus the personal name might be like the word *taluḫlu*, the Hurrian equivalent of *wardu*. (For personal names derived from titles of professions, cf. Inkâru, etc.)

ᶠTEŠ-ŠIMIKA: 9) There is no var. (8) in SMN 899. The reading is (1).

The most important part of this volume is the study of the elements of the personal names, especially the non-Akkadian elements. Here, Purves has made a most valuable contribution to the knowledge of Hurrian culture in general; the theophoric elements in particular throw a new light on the religion of Nuzi. While Purves has made all possible use of Hurrian and Mitannian information outside Nuzi, he has not considered the Hurrian words found in Nuzi tablets. The following are a few suggestions from this wealth of material, some of which was published in Starr, *Nuzi* I 528–44, and in RA XXXVI 112–220.

aḫu: Cf. *a-ḫu-uš-ḫu* in TCL IX 1:21.

amp: Cf. Starr, *Nuzi* I 538: the word *amb/panna/u/i* indicates not only some kind of wood for the manufacture of chariots, but also an object of wood. Cf. also SMN 2603:1–3: *1 bîtu e-kál-lu it-ti ap-pa-an-ni-šu;* SMN 593:55: *2 amelûti*ᵖˡ *am-ba-an-nu-uḫ-le-e*. (HSS IX 127:4: *a-na am-pa-ša* should be read *a-na ešša*ᵏⁱ. Cf. HSS V 97:1 and SMN 2764.)

amum: AASOR XVI 62:27 is translated by Speiser "representative" or "in connection with farm work." From unpublished documents we know that both Urḫi-kuššuḫ and Puḫi-šenni were in the loan business. Therefore the word *amumi(ḫ)ḫuru* may refer to the loan, and *a-mu-mu-un-na* in the "City of the Gods" (JEN 126:30) to the place where loans were transacted.

anz: Cf. *Nuzi* I 533: *še*ᵓ*u* (*a-na*) *an-za-an-na/u-(am)*.

arraḫ: Cf. *Nuzi* I 528 and BASOR No. 78, p. 19.

ašš: On *a-aš-ši-a-an-ni* as an adjective applied to garments, cf. SMN 225, *passim* (RA XXXVI 203), etc.

ašt: *Aš-du-uz-zi* in SMN 2671 corresponds to the common *ṣubâti*ᵖˡ *ša sinnišâti*ᵖˡ, and not to *damqu* (AASOR XVI 134).

ent: *E-en-ti* certainly is Akkadian. Cf. SMN 813:5: *a-na e-en-ti ša* ᵉ*A-pè-na-aš*, and SMN 3365:4: *a-na* NIN.DINGIR.RA *ša* ᵉ*A-pè-na*. The form ᶠ*E-en-ti-ú* would not be unusual; cf. the ideogram Ù.TI.Ú (SMN 504:2).

erw: A probable derivative of this Hurrian root is found in SMN 1060:11–12 (RA XXXVI 123): *še*ᵓ*u a-na bi-il-lu-ú i-na* (for *a-na?*) *e-er-be-et-te-na-aš-ta*, and in SMN 896:17: *ki-bá-tu*₄ *a-na er-be-et-ti*.

ḫal: Cf. *ḫa-al-um-ma epêšu* (TCL IX 12:12) and *ḫalaḫwe*.

ḫamanna: Cf. SMN 3630:23: *a-di-i ûmi eš-ši ḫa-ma-an-ni*.

ḫaniašḫari: On p. 193 Purves gives his reasons for not dividing the name into two elements, "since a similar grouping occurs of a single word in a Hurrian text from Boğhazköy." Yet, in a private communication, Purves suggested to me that *ašḫari* might be the god's name, since in the seal impression of King Itḫi-tešup (SMN 93, 1003, 1466) the name ^{d}*Aš-ḫar* occurs.

ḫaru: Cf. the Hurrian words *ḫarw-araḫḫu/e, ḫarw-aruzzu, ḫarw-arḫuzu, ḫarw-azu*, etc.

ḫaš: Cf. the Hurrian words *ḫaš-aḫušennu/i, ḫaš-artennu, ḫaš-azennu, ḫaš-ḫu, ḫaš-manu*, etc.

ḫišm: Cf. SMN 620:1, 12: 1(3) *ṣubâtu/i ši-la-an-nu it-ti ḫi-iš-mi-šu-(nu)*; perhaps also *ḫašm-ani, ḫašm-an-uḫḫe-na* (SMN 431, *passim;* 435:58).

ḫup: Cf. *ḫu-up-pu-(ú)*, name of a dye and of a garment.

ḫur: Cf. *ḫu-ra-e*, a kind of barley.

-ḫura: Cf. *iš-ku-uš-ḫu-ra* (SMN 288:6, 7).

ḫurp: Cf. *il-te-nu-tum ḫu-ur-bi-wa* and *1 ḫu-ur-pu-uš-ḫu* (SMN 863:43, 53).

ḫut: Cf. *ḫu-ut-tù-mu-um-ma epêšu* (JEN 572:29).

iššuḫr: Cf. *2 en-zu . . . a-na iš-šu-ḫu-ur-ri-wa* (SMN 627:1); *2 i-iš-šu-uḫ-ru ša siparri 4 i-iš-šu-uḫ-ru ša iṣi*.

izuz: Cf. *eqli i-zu-zu-uš-ši* (JEN 103:6).

kaw: *Ar-qa-pè-na* is an object made of wood (*Nuzi* I 536, n. 80*a*). Cf. *ka-wa-du-um-ma epêšu* (SMN 3556).

kel: Cf. the Hurrian word *ge-la-mu*, an adjective used with the word *šinni pira* and parallel with the permansive *uḫḫazu* (SMN 435:39, 45; RA XXXVI 157).

kelp: Cf. the Hurrian word *gal-pu-ur-ḫé*, used in connection with grains.

kelt: Cf. the spelling *qa-al-ti-ni-wa* (*magratti ša . . .*) (SMN 122:19) and the professional title *ge-el-du-uḫ-li* (SMN 908:6).

kenn: Cf. *še$^{?}$u a-na ke-en-ni-wa* (SMN 3187, 3371).

kewar: *Ge-wa-ru-um-ma* and *ge-wa-ru-ta epêšu* (SMN 3511, etc.) are used to describe the manufacture of objects made of hides.

kip: Is the word *ḫu-up-ši-ne-wa$_{a}$* (KUB XXXI 3 obv. 3), mentioned in connection with the name *Ḫu-up-šum-ki-bi*, a loan word from Akkadian *ḫupšu* (cf. BASOR No. 85, pp. 14 ff.)?

kirip-: Hurrian or Akkadian? Cf. *Qirib-^{d}Enlil* (SMN 2584).

kizz: Cf. *ki-(iz)-zi-iḫ-ḫu-ri* (SMN 643:4 [RA XXXVI 208] and 2570).

kul: Cf. *ṣubâtu ku-la-a-e* (SMN 8:7).

kuni: Cf. *iṣu kunišḫu* (SMN 1422, etc.).

kup: Cf. ^{d}*Ištar-ku-ba-wa-ni-wa* (AASOR XVI 47:91 [written ^{d}*Eštar*, not ^{d}*U-ak*]).

kurpa-: Cf. *kurpisu*(?), part of the armor.

kurw: Cf. *kurw-irizḫu*, a wooden object (SMN 1241).

kutati: Cf. *ku-ta-du≪du≫uḫ-le-e* (SMN 593).

kuz: Cf. *šipâtu ku-zi-in-na-an<ni>* (SMN 593).

mar (1): Cf. *šišê^{pl} ma-ra-wa-ta-a* (SMN 692).

mart: Cf. *ṣubâtu mar(ma-ar)-ta/da-tu/du* (SMN, *passim*).

mašḫu: Cf. *še$^{?}$u a-na ma-aš/áš/as-ḫa-ta/ti* (SMN, *passim*).

miš: Cf. *mi-šu-uḫ-ḫé* (SMN 431).

-mušni: This element is found in a title *a-gi-mu-uš-ni*, applied to a man called Ataja, who lent money until the harvest (SMN 1249, 2191).

našw: Cf. the month-name *atta-našwa* and the word *našwa(na)*, applied to slaves; also possibly a plural ending: *šar-ri-na-aš-wa* (SMN 3215, etc.).

nat: Cf. *nata-kušḫu* (*Nuzi* I 538).

nikazi: Cf. *ni-qa-za-mu-ú epêšu* (SMN 783).

-nipe: Cf. *ṣubâtu ni-be-ḫu* (SMN, *passim*).

nir: Cf. *ni-ra-ni-it-ḫu/e*, a wooden object (SMN, *passim*).

nizuk: Cf. *nizaqqamumma epêšu* (SMN 955).

nuḫ: Cf. *ṣubâtu nu-ḫu-(ú)/ḫé-(na)* (SMN, *passim*) and *nu-uḫ-pu-ru* (SMN 228:2).

nup: The text referred to is JEN 630. This is a loan of bricks. Since, as I have shown elsewhere, interest in Nuzi was always at the rate of 50 per cent, the fact that 15,000 bricks have to be returned after the harvest proves that the original loan of *1 nu-bi* of

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bricks was 10,000. Cf. also SMN 3264:25, where a list of 20 items of 1,000 bricks each is summarized as *2 nu-bi*.

nuš: Cf. (*ṣubâtu*) *nu-šu-(uḫ)-ḫé* (SMN, *passim*)

pazz: Cf. ^{d}*Pa-az-za* (SMN 2302:6).

puḫ: Cf. (*šîsû*) *pu-ḫa-ar-ri-in-nu* (SMN 2632); an object *pu-ḫu-uš-ḫu-ú* (SMN 1422).

pur(2): An unpublished text from Kirkuk in the Yale Babylonian Collection has the element ^{d}*Pur*.

putt: Cf. *magarru pu-ut-we-e* (SMN 2123).

sara: Cf. the canal *Sa-ra-e* (*Nuzi* I 530 and 532, n. 2). Perhaps also the name of the gate *Ša-ra-e* and the word *za-ra-e*, applied to grain (SMN 533).

šak: Cf. the Hurrian words *šakkuzzi*, *šakpazi*, etc.

šaš: Cf. *šaššumma epêšu*.

šekar: Cf. *še-qa-ru-ú* (SMN 863) and *še-qa-ru-uḫ-ḫu* (SMN 431).

šell: The profession of *šellinta(n)nu* is used for several of Šilwa-tešup's slaves, especially Pai-tešup; since he is also called *šakin bîti*, it would be tempting to see in this the Hurrian equivalent. But elsewhere (SMN 24, 531, etc.) loans texts indicate the loan as *šellintana(kumi)*. To this element should also be related the words *šilannu*, used in connection with garments, and *26 šiqli še-li-ḫu-ú-ru* (a dye?) (SMN 2598).

šelt: Cf. *ši-il-ta-aḫ-ḫu* (SMN, *passim*) (a measure of metal?).

šeš: Cf. *narkabtu še-ša-du* (a numeral?) and the profession *še-eš-tu-uḫ-lu*.

šešm: Cf. *še-ši-im-te-na* (AASOR XVI 82:1).

šin: From this element may be derived *ši-na-mu-ši-šu-nu* (SMN 2480), *šinamumma* and *šinapšumma epêšu*, and the geographic names *ši-ni-iš-ḫé* and *atappu ši-in-na-at-ti*.

šint: Cf. *še^{2}u a-na ši-in-du-un-ni* (SMN, *passim*); *alpê ša ši-in-tum* (SMN 3216); and *šinadumma epêšu*.

šir: Cf. *širumma epêšu*.

šuani: Cf. the profession *šu-a-na-at-ḫu;* the object *šu-a-nu-uḫ-ru* (SMN 431).

šuḫ: Cf. (*ṣubâtu*) *šu-uḫ-ḫé-lu* and *šu-ḫu-up-pu*.

šuḫun-: Cf. *šu-ḫu-un-ni-wa* (SMN 431).

šumkatitu: Cf. *1 šu-um-qa-la-at-ḫu ša siparri* (SMN 863).

šur: Cf. *šu-ra-at-ḫu/a*, used in connection with garments, and *šurrumma epešu*.

šuš: Cf. *šu-uš-ḫu* (SMN 1159).

šuššure: Cf. *še^{2}u a-na šu-šu-ri* (SMN 767), *10 ma-na 10 šiqli šu-šu-ri-in-nu* (SMN 1511, etc.); *še^{2}u šu-uš-šu-ri-in-ni/a* (SMN 872, 1024).

taena: Cf. [*immeri*] *zekri ta-e-na* (SMN 596).

taḫ: Cf. *taḫapšu* and *taḫupšḫu*.

tak: The word *takulatḫu* (*Nuzi* I 539) should be taken as Hurrian because of its ending; see under *šumkalatḫu*. Cf. *še^{2}u ki-ma ta-ku-uš-ḫu* (SMN 3221, etc.).

tan: Cf. *2 ta-ni-wu-ú ša iṣi* (SMN 1422).

tappi: Perhaps Art-atappi.

tarwa: Cf. *ta-ar(tar)-wi-iš-šá* (SMN 76, 2126).

teḫ: Cf. *te-ḫu-uš-šu*, grain (SMN 3009); *te-ḫu-uš-ši-ru*, garment (SMN 187, 643); *te-ḫu-uš-šu-ra*, horse (SMN 2695).

tiriku: Cf. *ti-ri-in-ku-un-ni* (SMN 1422).

tiš: Cf. *ka-za-tum . . . ša ti-iš-nu-uḫ-ḫé-na* (SMN 689).

tuḫ: Cf. *t/duḫši-wa*, used in connection with garments (SMN 302, 431, etc.), and *du-uḫ-ši-wa-aḫ-ḫé*.

tun: Cf. *še^{2}u a-na tu-ú-na* (SMN 946), *amêlu du-na-ni-ip-du-uḫ-lu* (SMN 2765).

tupk: Cf. *maški tu-up-ku-a* (SMN 342).

tur: Cf. *lubuštu tu-ra-ú* (SMN 916); *šipâtu du-ra-a-ú* (SMN 227:4); *abullu a-šar du-ri-we* (*Nuzi* I 530); *eqlu i-na du-ra-ši* (JEN 550:7, 9; 542:10, 11, 13).

tut: Cf. *t/du-t/di-wa-(na)*, used in connection with garments; *du-ud-du-pu*, *tu-ut-tu-pu-(ú)*, *du-ud-du-be-na* (SMN, *passim*).

ṭat: Add: *ú-a-at-ta-an-nu* (SMN 3245, etc.); *ú-a-at-na-nu-uḫ-li* (SMN 3371).

ura-: Cf. *ú-ra-zu-uḫ-lu* (SMN 2572); *ú-ri-(it)-ta-(an)-nu/ni*, used in connection with garments (SMN 1138, 1150).

urke: Cf. *ur-qa-nu-uḫ-li* (SMN 949, 1174) (Akkadian loan word?).

ušš: Cf. *še^{2}u a-na ú-uš-še-ni-wa* (SMN 3358); *10 ú-uš-šu-uḫ-ḫu ša siparri* (SMN 520); *ú-šu-wa* (SMN 493:1).

uzzu-: Cf. *uzzulikaru*, a female profession (SMN, *passim*).

want: Cf. *a-na ú-a-an-ta* (JEN 179:5).

waš: Cf. *še'u a-na wa-aš-ši-wa* (SMN 3202, 3357); *wa-šá-aš-ši-wa* (SMN 3270).

wat: Cf. *amêlûti wa-ti-ḫu-re-e* (SMN 2060).

wir: Cf. *sîsê wi-ir-ra-ri-ik-ku-e* (SMN 2062).

zaḫ: Cf. *iza-aḫ-ḫa-ru* (SMN, *passim*).

zaz: Cf. *sinnišâti*^{pl} *za-zu-uḫ-lu* (SMN 3381); *ṣubâtu za-zu-lu* (HSS V 95:1); *za-zu-um-ma epêšu* (HSS V 97:7).

zikari: Cf. *amêlu zi-qa-a-ri* (HSS IX 14:7).

zil: My reason for translating *zil(l)ikuḫlu* as "cowherd" is that this profession always occurs in lawsuits where theft of cattle is concerned and these were the men who captured the thieves; furthermore, the term *zi-il-lu-e-na* is descriptive of oxen (SMN, *passim*).

zinzilika: Cf. *6 talli zi-in-zi-il-ku* (SMN 1422).

zirr: Cf. *zirramannu* and *zirrannu*, used in connection with horses (AASOR XVI 130).

zul: Cf. *amêlu zu-ul-lu-uḫ-lu* (SMN 3049).

The study of Akkadian and Sumerian elements was made by Dr. MacRae. These elements will be useful for comparison with the non-Akkadian elements, especially for linguistic purposes. One cannot draw any ethnological conclusion from their use, as Dr. MacRae remarks (pp. 282 ff.). Indeed, one is surprised to find so many non-Hurrian names in a predominantly Hurrian culture. But, as in the case of seal impressions, legal and business methods, the influence of the surrounding Assyrian and Babylonian civilizations could not be avoided. It is interesting to note, however, that among prominent families, e.g., those of Teḫip-tilla and Wullu, none of their known descendants bear Akkadian or Sumerian names. The greatest frequency of interchange of Akkadian and non-Akkadian names is among the families of scribes. This leads inevitably to speculation as to whether the native population of Nuzi ever used Akkadian as vernacular, or whether they used it only for business purposes.

There are many cases—in fact, the majority of them—which are definitely either non-Akkadian or Akkadian and Sumerian, but, as Gelb has pointed out in his last chapter, many supposedly Akkadian elements might be non-Akkadian. At the present time there is no infallible rule to decide in favor of one or the other. This is especially true of the ideograms, which might have been used as phonemes and not as ideograms in several cases. Thus the name *Šu-ur-*^{d}*Adad*, which is also read *Šura-at-ta* (SMN 3593), might be a Hurrian name (Indo-Aryan; cf. the names ending in **-šura**). We have already noted above the misuse of ideograms.

Why should **arrapḫe** be listed as an Akkadian element, since Arrapḫa was the "City of the Gods" of the Hurrians? **Ḫalp-** in the name *Ḫal-pa-pu-ša* (and variants) could easily be from the city name Ḫalpi (cf. the name of Tešup-Ḫalpaḫi in SMN 2730 and RA XXXVI 1:6).

In this review I have tried to show the great value this book already has for Assyriologists and how it can be used, for it is both an achievement and a beginning. It has given us not only an important compilation of necessary material but also a working method for its use and interpretation. Assyriology is thankful to its authors for their achievement. Such a monument of scholarship is built once in a generation and well illustrates the painstaking efforts which scholars have to produce but which the outside world seldom sees or understands, since it is more interested in producing scientists to make the weapons of destructive wars than scholars to interpret its civilization.

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BOOK REVIEWS

Corpus Hermeticum (*Traités I–XVIII*): *Asclepius*. Texte établi par A. D. Nock et traduit par A.-J. Festugière. 2 vols. Paris: Société d'édition "Les belles lettres," 1945. Pp. liv+405.

Philosophies of religion current in the Roman Empire in the first few centuries of our era have been the object of many investigations during the past decades. New editions and studies of writers both Christian and non-Christian have appeared almost every year. The Hermetica, writings ascribed to the Egyptian god Thoth (whom the Greeks identified with Hermes), have suffered from the fact that their editor, Walter Scott, believed that they ought to make sense to him; he therefore re-wrote the text as he edited it and translated his own revised version. The text of the present edition is based on sounder principles, and, since Professor Nock takes the manuscript tradition seriously, he finds it necessary to devote twenty-six pages to its history and sixteen more to external witnesses. His investigations provide a model of clarity and precision in textual criticism. In the second volume he has performed a similar task in regard to the manuscripts, testimonia, Greek original, Latinity of the translation, and the composition and structure of the *Asclepius*.

Each tractate is provided with a brief bibliography, a summary of its theme, and an outline of its contents. Then on opposite pages are printed the text (with an apparatus containing the variants of the principal manuscripts and external witnesses and the conjectures of modern scholars) and a French translation, with notes discussing interpretation and providing parallels. This translation by Père Festugière is admirably lucid and accurate. One slight question might be raised as to *CH*, I, 22, "ils se rendent le Père propice par la voie de l'amour" for τὸν πατέρα ἱλάσκονται ἀγαπητικῶς (p. 14:15). Would not "they worship the Father in love" be more satisfactory (cf. *Odyss.* iv. 319 and R. K. Yerkes, *ATR*, XXIX, 30)?

It is noteworthy that the first external witness to the text of the Hermetica is P. Berol. 9794 (late third century), a collection of Christian prayers. And one of the earliest references to the literature is in the Christian apologist Athenagoras, *Legat.* 28 (cf. *Asclep.* 37, with J. Geffcken, *Zwei griechische Apologeten* [Leipzig, 1907], p. 224). This observation leads us to consider the religious environment of the Hermetica. As Nock observes:

> Hermétisme et *Oracles Chaldaïques* offrent de frappantes ressemblances avec maints écrits du gnosticisme chrétien. Ce phénomène paraît dû, non pas à un emprunt direct, mais au fait qu'ils dépendent ensemble d'un même fonds intellectuel et répondent à des besoins analogues de la sensibilité de l'époque: désir de certitude et de révélation, goût pour l'ésotérisme, penchant pour les abstractions, souci de l'âme et de son salut, tendance à considérer le monde par rapport au sort de l'âme et le sort de l'âme par rapport au monde [p. vii].

Since these words were written, Festugière has provided an excellent sketch of this environment in the first two chapters of his *La Révélation d'Hermès Trismégiste*, Volume I (Paris, 1944). A striking feature of the study of the Hermetica is that each investigator tends to bring his own set of parallels to them. For example, Reitzenstein (*Poimandres*) found a certain amount of Egyptian religion in them; J. Kroll (*Die Lehren des Hermes Trismegistos*) interpreted them in the light of contemporary philosophy; and C. H. Dodd (*The Bible and the Greeks*) explained them largely in terms of Hellenistic Judaism. Nock and Festugière, like the Hermetists themselves, have been more eclectic.

One avenue of approach seems to have been rather slighted, for the editors give few parallels to early Christian literature outside

gnosticism.[1] Indeed, the Hermetica themselves are sometimes anti-Gnostic, e.g., in *CH*, IX, 4 (p. 98:6), IX, 9 (p. 100:3; cf. G. Quispel, *Vigil. Christ.* 2, 115), and XIV, 5 (p. 223:21, with n. 15, which compares Plotinus' work against the Gnostics). And there are a good many parallels to Theophilus of Antioch,[2] the pseudo-Justin's *Oratio ad Graecos*, and to the liturgy of Christian Antioch.

1. Theophilus of Antioch wrote his apologetic works *To Autolycus* about 180. We find the following parallels: *CH*, I, 26 (p. 16:12)—*Th*, II, 27 (p. 132 Otto), also Irenaeus, *Adv. haer.* iv. 38. 4 (p. 297 Harvey), Hippolytus, *Ref.* x. 34. 3 (p. 293: 4 Wendland); I, 30 (p. 17:17 κάμμυσις)—*Th*, I, 2 (p. 6); II, 14 (p. 37:15)—*Th*, I, 3 (p. 10), also Irenaeus, *Adv. haer.* ii. 13. 3 (p. 282); II, 17 (p. 39:7)—*Th*, I, 4 (p. 14); V, 11 (p. 65:4)—*Th*, I, 4 (p. 14); X, 17 (p. 121 envelopes)—*Th*, I, 5 (p. 18). These are only the more specific parallels, for all the apologists make use of contemporary philosophical language. But these are rather striking.[3]

2. The *Oratio* of pseudo-Justin (discussed by E. R. Goodenough, *By Light Light* [New Haven, 1935], pp. 298–305) is clearly Hellenistic Jewish apologetic; note the allusion to Amos 5:21 at the beginning of chapter 4 (p. 14 Otto). There are two parallels to the Hermetica: *CH*, I, 26 (p. 16:12)—*Or* 5 (p. 18); X, 15 (p. 120:9) εἰς τὸν Ὄλυμπον ἀνάβασις—*Or.* 5 εἰς τοὺς ὑπὲρ Ὄλυμπον ὄρους.

[1] A few additional New Testament parallels may be noted: *CH*, II, 14 (p. 38:5)—Mark 10:18; IX, 3 (p. 97:12)—I Tim. 1:9–10, Rom. 2:21–23; XII, 23 (p. 183:16)—James 1:27.

[2] Whom one would think Lactantius knew in Greek, *pace* W. Harloff, quoted on p. xxxviii. There is no trace of a Latin version of Theophilus. A new edition and translation of Theophilus by G. Bardy and J. Sender was published in Paris this year.

[3] For the relation of the Hermetica to Clement cf. L. Sanders, *L'Hellénisme de saint Clément de Rome et le paulinisme* (Louvain, 1943), pp. 118–21. Nock and Festugière make no mention of the similarities to the *Pastor Hermae* which Reitzenstein stressed in his *Poimandres* (cf. Festugière, *La Révélation*, p. 80, n. 14). They can probably be explained as coincidental, since Dibelius demonstrated in his commentary that Hermas is strongly influenced by Hellenistic Judaism. It is still interesting, however, that Poimandres is interpreted as κοσμός in *CH*, XIII, 19 (p. 208:17), and that in XIII, 7, there are twelve dread sins, as in Hermas there are twelve commandments (cf. *HTR* 40, 11). Are both zodiacal?

3. The hymns of *CH*, I, 31–32 and XIII, 17–20, are similar to the praises of the Creator in the Christian anaphora, which, as Bousset demonstrated (*Nachrichten . . . Göttingen*, 1915, pp. 435–85), is Hellenistic Jewish in origin. With the ἡσύχασον, ὦ τέκνον of *CH*, XIII, 16 (p. 207:12), we may compare the σιγησάτω πᾶσα σάρξ of the Liturgy of St. James (p. 41:25 Brightman), and with the ἅγιος of I, 31 (p. 17:23), the ἅγιος εἶ (p. 51 Brightman) and the πατὴρ ἅγιος of John 17:11 and Didache 10:1. Such expressions, of course, are largely conventional.

The general conclusion to which these parallels lead is that the Hermetica and what we may call Hellenistic Jewish Christianity have a good many points of contact.[4] Both Theophilus (*HTR*, XL, 227–56) and the Antiochene anaphora (*ATR*, XXX, 91–94) are representatives of this type of thought. And we might even imagine that some of the Hermetica represent what post-Philonic Hellenistic Judaism could become as it lost its ties with historical Judaism and most of the Old Testament. This is, of course, not the only element in the Hermetic melting-pot, but it is a relatively important one.

In this regard the *Asclepius* is somewhat different from the *Corpus*, for it contains an explicitly Egyptian apocalypse[5] (though based on a Jewish model) and a vivid encomium of physical love (p. 322:15). Though the act is called a *mysterium*, its description is much less like Eph. 5:32 or the passage cited in the notes from Philo *De cherub.* 43 than like the Epicurean physiological detail of Lucretius iv. 1192–1208 (cf. Epicurus in Diog. Laert. x. 6). And from the doxography of Aetius (*Plac.* v. 5. 1) we know that Epicurus agrees with *Asclep.* that both male and female contribute semen. Scott (*Hermetica* III, p. 144) compares the *Amatorius* of Plutarch but misses the best parallel (4. 2): αἴσχιστον δὲ καλεῖς γάμον καὶ σύνοδον ἀνδρὸς καὶ γυναικός, ἧς οὐ γέγονεν οὐδ' ἔστιν ἱερωτέρα κατάζευξις;

[4] A Gnostic parallel to the creator as μήτρα (*Asel.* 41, p. 353:10)—Epiphanius, *Panarion haer.* 25. 5 (I. 273 Holl), 26. 1. 1 (275).

[5] Sancta (p. 328:12); cf. ἱερωτάτη χώρα, Theophrastus quoted by Porphyry, *De abst.* ii. 5, quoted by Eusebius, *Praep. ev.* i. 9. 7.

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In conclusion it may be observed that few texts published in recent years have been more ably edited, translated, and interpreted than has the *Corpus Hermeticum* of Nock and Festugière. It will long remain basic for our understanding of the spirituality of the Roman Empire. The actual volumes, beautifully printed on good paper, are worthy of the excellent series in which they appear. And anyone who wishes to understand the development of Catholic Christianity must read the Hermetica. Confused and confusing as they often are, they constitute an indispensable part of the *praeparatio evangelica*, as Augustine (*De civ. dei* viii. 23–24) was aware.

ROBERT M. GRANT
University of the South

Tello. By ANDRÉ PARROT. Paris: Editions Albin Michel, 1948. Pp. 368+32 pls.+62 figs.

From 1877 to 1933 excavations were carried out at Telloh. Now the results of the twenty campaigns are collected between the covers of one volume and critically discussed. It is a merit of the author that he sets out deliberately to assist us in co-ordinating the work done by different men in different ways. Plans allow us to locate their undertakings on the site and to judge the relations of the work of the different expeditions to one another. And the illustrations, too, aim at giving a comprehensive picture of what has been discovered at Telloh; to this end they are accompanied by sections of catalogue-like text. It is, for instance, a great convenience to find here, together on seven plates, all the well-preserved statues and heads of Gudea, whether found by the expeditions or preserved in one of the seven museums or collections which bought them from dealers. Parrot also shows (p. 16) that illicit digging went on at Telloh before De Sarzec started work, though not on the sensational scale which we have witnessed in our generation.

Parrot has tried to wring the last drop of information from the hopelessly inadequate records of his predecessors. It is a relief to all his colleagues that he did so, and we must be grateful, for one could not really be at peace before this had been tried, even while one suspected (what now, alas, has become certain) that very little could be recovered. After all, the Sumerians did build largely with sun-dried bricks, and if excavators only notice gypsum floor slabs and alignments of fine baked bricks, nobody can retrace the walls which were gaily demolished. The oddments left to be planned make little enough sense, and when Parrot maintains (pp. 54–60) that the earliest of these was not, as Heuzey thought, a kind of cellar or larder but part of the earliest temple of Ningirsu, he is probably right, but we are not much the wiser. Parrot also discusses how the famous cylinders of Gudea, in which the renewal of the temple of Ningirsu is described, may be related to the actual ruins (pp. 150–56). He thinks that the temple of Baba (Bau) has not been discovered yet or, at least, not recognized, while De Genouillac seems to have found the emplacement of the temple of Ningizzida and Geshtinanna but could not recover its layout.

Parrot also presents here the results of his own excavations, described hitherto only in a popular book (*Villes enfouies* [Paris 1934]). His most remarkable discovery was an odd structure of baked bricks (pp. 211–19) for which there is nowhere a parallel. He interprets it as a hypogeum where city rulers were buried while their worship was maintained on the open space between the walled tombs. This interpretation is as good a guess as another, even though one would have expected a heavier superstructure (by analogy of the Third Dynasty tombs at Ur), so that it would form a true monument and at the same time protect the interments. However, such a superstructure may have been carried away by men in search of bricks. Even so, the hypothesis contains several features which are not easily accepted. The least important of these is the supposition that the *plan* of either half reflects the *profile* of a boat; this presupposes a degree of abstraction in design with which I should not willingly credit these, or any other, builders. More important in determining the purpose of the structure are the ideas on the worship of rulers which Parrot seems to enter-

tain. We know that deified rulers of Ur were worshiped during their lifetime, but it is quite impermissible, on the existing evidence, to ascribe this usage either to other cities or to other periods or to dead rulers. I have recently discussed the material bearing on this question; the offerings for a statue of a dead king supported the efficacy of the statue—they do not prove that the king was regarded as a divinity. It was a magical rather than a religious usage and was kept up by his successors as a duty to one of their forebears; but it was not part of a popular cult. We have no evidence that such a cult—a popular cult—existed or that the rulers, as Parrot assumes, desired to maintain relations with the world of the living. Such theories (p. 218 end) really cannot further the explanation of the enigmatic building which he found.

This brings us to the weakest aspect of Parrot's useful book: the general discussions tend to be ill considered and unrelated to the literature on the subject. Let me mitigate this criticism at once by the reminder that the book was probably written while the Germans were in Paris and that Parrot has since become keeper of his department in the Louvre and has, under appalling difficulties of which the reviewer has firsthand knowledge, arranged a completely new exhibition of the West Asiatic antiquities of the Louvre which is an aesthetic triumph. Nevertheless, we must take his book as he presents it to us; and then the criticism I have made cannot be withheld. I shall illustrate it on a few points.

During the thirties the rough-and-ready periodization of the pre-Sargonic civilization of Mesopotamia has been clarified and put on a solid basis. Parrot is aware of it but does not seem to have grasped its scope. He prefers, he says, to study the Early Dynastic period at Telloh on the basis of the dynastic lists, since only the excavators not finding names are forced to accept an architectural or stratigraphic classification. "Puisque, à Tello, les noms existent, il est tout aussi commode de s'appuyer sur eux" (p. 54). The facts are different: Jacobsen has shown that the Dynastic lists cover only the last part of the Early Dynastic period, and the names from Telloh belong to the very end of that last part (Early Dynastic III b). Hence Parrot, holding on to the names, lands himself in the greatest confusion. On page 69 the fairly well-known development of early sculpture appears in what reads like a parody: geometric representation dominates from the Jemdet Nasr period to Urnanshe. The reader may see in our publication of sculpture from the Diyala region (in which the material from other sites has been discussed too) how the Jemdet Nasr period is not characterized by a geometric tendency but rather by the reverse; how pronounced geometric stylization asserts itself in Early Dynastic II (unrecognized at Telloh); and how, before the end of that period, an interest in the physical differentiation of parts of the human body takes the upperhand and modifies the abstract forms—all this before Urnanshe was born ("OIP," Vols. XLIV and LX).

The important "Personage aux plumes" from Telloh can likewise be put in its proper place only when the whole of the material is taken into account. Its inscription, I am told, places it alongside the inscribed "lion-bird" Imdugud from Khafaje ("OIP," LVIII, 289–90) which was found in Sin Temple VIII and belongs, therefore, at the very latest, to Early Dynastic II, but may be older; and the dress of the "Personage aux plumes" would be easier to understand in Early Dynastic I, for it is common on Protoliterate monuments and not thereafter. I do not know how many centuries before Urnanshe it should be placed, but, since we have the synchronism of late Protoliterate with Dynasty I in Egypt, the possible range is from three hundred to five hundred years. In any case, the "Personage aux plumes" antedates the remains from Fara, Kish A, and Mari, all of which are, in their turn, earlier than Urnanshe (see "OIC," No. 20, pp. 35–73). Yet Parrot dates it in "the century which preceded Urnanshe and in the phase which is called by some Early Dynastic I" (p. 60).

As to the interpretation of monuments, the reviewer may be excused when he objects to Parrot's statement that there is "aucune difficulté" (p. 116; cf. pp. 114 and 137) to identify Gilgamesh and Enkidu on cylinder seals; for

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he looked in vain for a refutation of his own arguments, published early in 1939, that Enkidu may possibly be there, but that the naked hero of the seals fulfils a variety of functions never ascribed to Gilgamesh in the Epic, and none of the feats Gilgamesh is described as performing (*Cylinder Seals*, pp. 62–67). Parrot even dubs the nude hero "Gilgamesh" when he holds a doorpost on a terracotta plaque (Fig. 48*a* and p. 240), although we know from texts that such figures, used with a companion, and called "Twins," were a protection against evil influences and were buried in the corners of courtyards (*Archiv für Orientforschung*, V, 218).

As regards style, too, there are some curious judgments in the book. We have noted the treatment of Early Dynastic sculpture and some passing remarks, either that perspective is not used (p. 110) or that figures express the subjects' mood (pp. 80, 97), are surely out of place in a discussion of the art of a pre-Alexandrian age. Equally serious is the dilemma which Parrot sees in the Lugalanda sealings; he thinks that they are like those from Fara (Early Dynastic II) while yet Lugalanda belongs to the very end of the Early Dynastic III b period. The answer is that there is no dilemma at all once the development of the styles of seal-cutting is followed with some attention. The "resemblance" between the Lugalanda sealings and the Fara seals is then reduced to the mere fact that both use the animal frieze, which anyway continues in use. The Lugalanda seals have been called the "classical examples" of the final style of the Early Dynastic period, which is also represented by such well-known seals as The Hague No. 3 and De Clercq No. 41 (*Cylinder Seals*, Pls. XII*b*, XIII*a*). They are a reaction against the extreme form of relief style which, for instance, in certain seals from Ur, had led to heavily overcharged friezes with crossing animals. The final style of the period in the Lugalanda examples and others, retains the relief work but spreads the figures and avoids crossing and in both respects leads over to the style which opens the Akkadian period and is characteristic for the reign of Sargon, (*Cylinder Seals*, pp. 52–57, 80–81).

Having pointed out the strength and the weaknesses of Parrot's useful book, we may end by drawing the reader's attention to a surprise he had no right to expect. On Plate III a unique and hitherto unpublished figure is depicted. It has been in the collection of a well-known dealer, the late Géjou and shows a naked man, with the heavy beard and wavy hair falling down over the shoulders, which are usual in the earlier school of Early Dynastic sculpture. The figure kneels and thus recalls the vase-bearers which we found at Tell Asmar and Tell Agrab ("OIP, Vol. LX; *More Sculpture*, Pls. 33, 34, 91), but the new statuette, reputedly found at Telloh, kneels with both knees on the ground. It represents a curious power, for its hands, bent behind its back, hold each a formidable snake. The reptiles coil round the figure's arms, pass underneath them, and hold their heads on either side of his face. Moreover, he wears two fishes on his chest suspended from a necklace. I am not able to name this figure, but it is amusing to realize that a faker had prepared, a number of years ago, a neater and cleaner copy which has duly been published in *Gazetta des beaux arts*, Volume XXI (1939).

H. FRANKFORT
University of Chicago

The United States and the Near East. By E. A. SPEISER. Cambridge: Harvard University Press, 1947. Pp. xvi+263. $2.50.

As far as it goes, this book is wholly admirable. It contains in forty pages a most brilliant, profound, and competent exposition of the permanent patterns of geography and culture which have made the Near East. In a second part the author offers an instructive survey of the main political problems and events which are indispensable for the understanding of the contemporary problems with which the Near East faces the Western world. In a third part the problems of the present and the future are considered.

It is inevitable that the treatment of so extensive a subject in so small a volume will leave the reader in quest for more information on points of special interest. This is a criticism directed to the editor of the "American Foreign Policy Library," of which this book

constitutes the second volume. The limitation of space has imposed upon the author an insoluble task. Even so, the incompleteness of the treatment of Turkey and Iran seems to put more emphasis upon the countries of the Arabian Peninsula than is justified by the relative importance of the two groups of countries for contemporary world politics.

In the part dealing with the problems of the present and the future, the author adds to the intellectual and literary qualities, which are obvious throughout, another one of high order: impartiality and balance of judgment. In his discussion of the Palestinian question, for instance, the author, it seems, has gone as far as it is humanly possible to be objective and just.

Yet it is exactly these intellectual and moral virtues which make the discussion of contemporary political problems not wholly satisfactory. On the one hand, the author is fully alive to the obligation of the American political observer of the Near East to consider its problems in the light of the national interests of the United States. On the other hand, the author labors under the delusion, still so prevalent in Western civilization, that, with regard to political problems, "the council which will carry the greatest weight is likely to be the council fortified by the largest battery of indisputable facts," and that the contest in which we are engaged in the Near East with other nations is "ultimately a question of perhaps the most honorable kind of international competition that can be engaged in: competition in the cooperative quest for truth."

This is an engaging picture of international politics, resembling an international congress of scholars; but it is not a true one. For politics is not competition in the quest for truth but competition in the quest for power. In his analysis of specific political problems and in his over-all criticism of the operation of the State Department and of our policies with regard to the Near East, Professor Speiser seems to be fully aware of this incontestable truth. Thus, in evaluating the national interests of the United States in the Near East, he is justly critical of the identification of either the missionary interests, of the interests of oil companies, or of the interests of British foreign policy with the national interests of the United States.

Yet, when it comes to defining that national interest in positive terms, we are left without clear criteria by which to evaluate the objectives and moves of American foreign policy. If one would derive conclusions in these respects from the author's own analysis, one would have to say that the United States has strategic and economic interests in the Near East and that these interests can only be safeguarded by association with the strongest and most reliable force existing in the Near East. Recent events have shown, what might already have been obvious from the experiences of World War II, that this force is not to be found in the Arab League. It is that fundamental fact which puts into its true light the American foreign policy of the past and the problems which confront it in the future.

HANS J. MORGENTHAU
University of Chicago

Semitic Studies in Memory of Immanuel Löw. Edited by ALEXANDER SCHEIBER. ("Publications of the Alexander Kohut Foundation.") Budapest, 1947. Pp. 361+(Hebrew section) 195+pls.

This imposing volume brings to mind the frightful sufferings endured by many Jewish Semitists at the hands of the Nazis and at the same time symbolizes the triumph of scholarly courage over irrational persecution. From the slightly unidiomatic but dignified and moving English Foreword to this chiefly Hungarian and Hebrew memorial to a master-Semitist we may quote a few lines to acquaint the readers of this brief notice with the circumstances of its publication.

We intended to publish this Volume for the occasion of the 90th birthday of Immanuel Löw, as it appears obvious from the earlier parts of this book. The preparation of such a Jubilee Volume was announced in the presence of Löw, on the occasion of the Jubilee Religious Service held in the Synagogue at Szeged, on the 16th of January 1944 (the 20th of Teveth). The German occupation, however, put an end to the printing of the Löw Jubilee Volume as it did to all other Jewish

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aspirations. We got as far as page 105 but the censorship forbade the printing of the remaining sheets. Of the Hebrew part only two sheets were finished.

After the Liberation we found the printed sheets in perfection in the respective workshops but, alas, the very one to whom we dedicated our book had perished and many of those who contributed to it. Immanuel Löw together with the members of his congregation was thrown into a ghetto and later taken to brick-works. Dr. Eugen Frenkel bears witness that Löw, who till then was alert mentally and physically fresh, suddenly became his "ninety years." He lost all his contacts with the world outside and went completely blind. The Zionists managed his and his family's extradition from the transport waggon in Budapest and there he was taken to the Hospital for the Needy in Wesselényi-Str. Shortly after his admission he died due to the stain [strain?] put on him by his past experiences and prolonged hunger, on the 19th of July 1944. . . . On the 23rd April 1947 his remains were exhumed and transported to the Cemetery at Szeged, to be buried there next to Leopold Löw. . . .

Those of the Contributors to this Volume who have also perished are: J. Bakonyi, G. Balázs, B. Bernstein, S. Birnfeld, A. Büchler, D. Friedman, I. Gábor and P. Vidor. The Reader receives herewith their last work.

If the various articles had been written in time of peace and security, their scientific value would have aroused general admiration and appreciation. That such predominantly excellent studies were completed in the face of war and terror must create astonishment and deep respect for their authors.

As in the case of all such collective volumes, the variety of subjects treated, though almost all of them come under the single head of Semitic studies, makes it difficult for any one scholar, even that rarity among American Orientalists, one acquainted with Hungarian (in which most of the non-Hebrew articles are written), to give a just estimate of their value. In this brief notice I shall therefore limit myself to listing the contributors and titles of articles. The editor has fortunately supplied English translations of the Hungarian titles. I shall do the same for the Hebrew ones.

Sandor Scheiber, "Immanuel Löw"; Eugen Frenkel, "Bibliographie der Schriften Immanuel Löws"; Pál Vidor, "Immanuel Löw and the Jewish Community in Buda"; József Bakonyi, "The Influence of Hebrew Phonetics on the Yiddish Language"; Miklós Bernath, "The Conception of the 'Great Beyond' in the Bible"; Béla Bernstein, "Die Anfänge der Judengemeinde in Nyiregyháza"; Imre Csetényi, "The Jewish Artists of the 1860's as Reflected in the Hungarian Daily Press"; Mór Fényes, "The Dogmatic Conceptions of the Benedictions"; David Fokos-Fuchs, "Idiomatic Analogies"; Dénes Friedman, "A Hundred Years of Jewish Studies"; Ignác Gábor, "The Verses of the Psalms and the Choir of the Temple"; Fülöp Grünvald, "Letters to and about Leopold Löw"; Bernát Heller, "Literary Parallels to Berzsenyi's View of Human Individualism"; Samuel Löwinger, "Nebuchadnezzar's Dream in the Book of Daniel"; Sándor Kozocsa, "The Second Edition of Vörösmarty's Translation of the Thousand and One Nights"; József Somogyi, "Ad-Damiri's *Ḥayat al-Ḥayawan*"; Bence Sabolcsi, "A Jewish Musical Document of the Middle Ages: The Most Ancient Noted Biblical Melody" [in English]; Samu Szemere, "Nietzsche and Judaism"; Jenö Zsoldos, "Hebrew Legendary Lore in Hungarian Literature"; József Turoczi-Trostler, "Realism and the History of Literature"; Josef Waldapfel "Moriz Kármán: Leopold Löws Schüler und Liebling"; Nicolas Szabolcsi, "Témoignages contemporains français sur Shabbetai Zevi"; Raphael Patai, "Biblical and Rabbinical Data on the 'Culture Pattern'" [in English]; Georges Vajda, "Une version hébraique inconnue des 'Cercles imaginaires' de Batalyawsi"; Imre Trencsényi-Waldapfel, "Adam and Ahashuerus"; Leon Nemoy, "Anan Ben David" [in English]; Raphael Levy, "L'Etymologie du roussillonais 'enfremunar'"; Arnold Csech, "Pestalozzi and the Jewish Legend"; Samuel Krauss, "Six Hungarian Rural Synagogues"; Livia Kovács, "Zum Problem der Sekundärdiftonge in der jiddischen Sprache"; Heinrich Guttmann, "Die Kain und Abel Aggadot in den Werken des Kirchenvaters Augustin"; István Hahn, "Magna sacerdos arboris"; Theodor H. Gaster, "Some Emendations in the Text of the Bible" [in

English]; Béla Vihar, "The Refugee as a Jewish Prototype"; Mózes Rubinyi, "Makai Emil"; Paul Turán, "On Power-Series Whose Coefficients Form a Multiple Monotonic Sequence"; Odön Beke, "Das VI. und VII. Buch Mosis"; Sándor Büchler, "The Medieval Hebrew Codex-Fragment of Turim in Körmend"; Odön Kálmán, "The Color of Mourning Apparel among the Jews"; Noemi W. Munkacsi, "Jewish Customs and Ceremonies in the German Death-Camps for Women"; Jacob Leveen, "Autograph Letters of Moses ben Mordecai Zacuto from the British Museum Manuscript Or. 9165" [in English]; H. J. Zimmels, "The Historical Background of the Midrash Eleh Ezkerah" [in English]; Imre Benoschofsky, "Immanuel Löw as a Darshan"; László Péter, "The Friendship between Immanuel Löw and the Folklorist Louis Kálmány"; Alexander Scheiber, "Additions to the Bibliography of Immanuel Löw"; Ludwig Koehler, "Immanuel Löw."

The Hebrew section contains the following eight articles: Samuel Hayyim Birnfeld, "A Blessing for Abraham Hayyim" [Immanuel Löw]—a dedicatory poem with an acrostic; Zevi Balázs, "Introduction to the Study of Recent Traces of the Settlement of the Jews in Pannonia"; Solomon Vadar, "Catalogue of the Pityyutim and Poems in the Genizah Fragments in the Library of David Kaufmann in the Hungarian Academy of Science in Budapest"; Abraham N. Z. Rathe, "The Ancient Prohibition against Withdrawing Any Book from the Beth Ha-Midrash"; Moses Munkacs, "The Menorah, True Symbol of Judaism"; Menachem Zulai, "Additions to the Piyyutim of Yannai"; Alexander Scheiber, "New Fragments from the Book Talmuda Rabba of Joseph ben Jacob Ha-Babli"; Solomon Shunami, "Bibliographies of the Works of Jewish Scholars and Writers Published in the Years 5699–5707 [1939–47]."

From this list of contents the reader can get some idea of the range of interests to be found among the students and colleages of Immanuel Löw, but it is no depreciation of the present work to say that the entire volume, as solid as most of its contents are, is not so great a contribution to scholarship as are the most important of Löw's own writings. With this statement I feel sure that the contributors would be among the first to agree.

RALPH MARCUS
University of Chicago

Hiérapolis de Syrie: Essai de monographie historique. By GODEFROY GOOSSENS. (L'Université de Louvain, "Recueil de travaux d'histoire et de philologie," 3me Sér., 12me Fasc.). Bibliothèque de l'Université de Louvain: Louvain, 1943. Pp. xiv+224.

The reviewer regrets that through no fault of the editors of this *Journal* M. Goossens' monograph, which was published five years ago, has only recently been given him to review. Undoubtedly it was the fate of this work, as of so many others published in enemy-occupied territory, to be withheld from distribution in this country until a considerable time after the ending of the war.

The author of the monograph, which in size and importance deserves to be considered a substantial book, has gathered all archeological material and literary sources in Greek, Latin, Hebrew, Syriac, and Arabic which provide information about the topography, history, religion, and monuments of Hierapolis, a city best known perhaps to classicists and orientalists from Lucian's treatise on *The Syrian Goddess*. Although Goossens modestly describes his work as "un essai," it is one of the most complete accounts known to the reviewer of a Near Eastern City of importance during the period of late antiquity. In addition to collecting the scattered documents, he has studied the divergent views of recent students and has shown good judgment in reaching conclusions only where the documentation is complete and reliable. Goossens does well to remind us (p. x) that "l'histoire de l'Antiquité est toujours à la merci du hazard, qui demain peut-être révélera certains documents décisifs."

It is gratifying, incidentally, to read the author's acknowledgment of help received in his studies of Syrian history and archeology from the staff of the Oriental Institute during his residence here a decade ago as a graduate fellow of the Belgian American Foundation.

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Goossens' monograph is organized under the following headings: Introduction; (I) "Generalities on the Geography and Names of the City"; (chap. ii) "Literary and Archeological Documentation"; Part I, "The Sacred Precinct"; (iii) "Religious Origins"; (iv) "The Aramaean States and the Assyrian Empire"; (v) "The Achaemenid Empire"; Part II, "A Great Religious Center"; (vi) "The Seleucid Empire"; (vii) "The Decline of the Seleucid State and Roman Control"; (viii) "The Roman Empire, the First Phase"; Part III, "A Military Site"; (ix) "Transformation of the Roman State"; (x) "The Roman Empire, the Second Phase"; Part IV, "A Provincial City"; (xi) "The Omayyad and Abbassid Empires." These chapters are followed by four appendixes: "The Foundation of the City by Seleucus I Nicator"; "The Plundering of the Temple by Antiochus IV Epiphanes"; "The Passage of the Euphrates near Hierapolis"; and "A Sketch of the Religious History of Hierapolis." The volume is concluded with a table of references to Lucian's *The Syrian Goddess* and a full index of personal and geographical names.

Goossens' study deserves the highest praise for its comprehensiveness, accuracy, good judgment, and up-to-dateness. The reviewer has not noted the omission of any recent literature in the many references given in the footnotes. It is a work of which the University of Louvain may well be proud and to which future historians of ancient Near Eastern cities would do well to look as a model.

RALPH MARCUS

University of Chicago

Cities of Nabrakhta (in Hebrew with English summary). By J. M. GRINTZ. Reprinted from *Zion*, Vol. XII (1947). Pp. 16.

In this slight article the author considers the Palestinian topography of Judith 4:4–6 and argues that some of the places mentioned were settled as early as the period before Nehemiah, as were other Jewish settlements in Galilee and Peraea. The results of the monograph should be weighed against the recent findings of another scholar, F. Strummer, *Geographie des Buches Judith* (Stuttgart, 1947).

R. M.

L'Influence du Mazdéisme dans la littérature persane. By MUḤAMMAD MOĪN (MUʿĪN). (In Persian.) Introduction in French by HENRY CORBIN. ("Publications de l'Université de Téhéran," No. 9). Teheran: University of Teheran, 1948. Pp. 36+623.

The object of Dr. Moīn's study is to show the preservation of ancient Iranian elements in Persian literature and, more particularly, in the poetry of its Muslim period. In his lucid and sympathetic Introduction Dr. Corbin presents a summary of the author's position, adding here and there an interpretative note where Dr. Moīn, for the moment at least, confines himself to an imposing collection of material, the well-thought-out organization of which is deserving of special notice. The first four chapters draw a comprehensive picture of ancient and Sassanian Mazdaism; the remaining four trace its (literary) afterlife. The industry of the author as well as his intellectual vigor in carrying through his difficult purpose have provided us with a promising basis of future study. The conception of Iran as the home of Gnostic thought and the reassertion of the Gnosis in the Shiʿa is forcefully driven home but the interlacing of ideological influences in the Middle East appears to this reviewer to be more intricate than Dr. Moīn would seem to suggest. On the other hand, he has made it very likely that closer scrutiny would uncover more "Zoroastrian" thought motives and style elements in Neo-Persian literature than previously suspected. Further analysis of the tendencies within Mazdaism, orthodox and sectarian, remains a desideratum. Dr. Moīn's straightforward style is to be commended. It is indeed a happy development that the University of Teheran is emerging as a significant center of Oriental research. We are looking forward to further important contributions from the University and its gifted member, Dr. Moīn.

G. E. VON GRUNEBAUM

University of Chicago